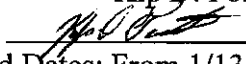


VPDES PERMIT FACT SHEET

This document gives the pertinent information concerning the issuance of the VPDES permit listed below. This permit is being processed as a minor industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq. The proposed process discharge will result from the operation of a groundwater remediation system. There is also an existing storm water discharge from the municipal landfill. This permit action consists of issuing the permit for a five year term with limitations for ammonia as nitrogen, alpha terpineol, benzoic acid, BOD₅, pH, p-cresol, phenol, total suspended solids, and total recoverable zinc. Special conditions have also been included for water quality criteria monitoring and toxicity testing. (SIC Code: 4953)

1. **Facility Name and Address:**
Franklin County Sanitary Landfill
40 East Court Street
Rocky Mount, VA 24151
Location: 9340 Virgil H. Goode Highway, Rocky Mount, Virginia
2. **Permit No:** VA0092142 Permit Expiration Date: Not Applicable (Issuance)
3. **Owner Contact:** Name: Mr. Richard Huff II
Title: County Administrator
Telephone No: (540) 483-3030
4. **Application Complete Date:** October 23, 2007
Permit Drafted By: Becky L. France
Date: November 30, 2007, Revised 1/7/08, 2/4/08
DEQ Regional Office: West Central Regional Office
Reviewed By: Kip D. Foster, Water Permit Manager
Reviewer's Signature:  Date: 2/7/08
Public Comment Period Dates: From 1/13/08 To 2/11/08
5. **Receiving Stream Classification (Outfall 001):**
Receiving Stream: Little Chestnut Creek, North Fork (River Mile: 2.26)
Watershed ID: VAW-L15R
River Basin: Roanoke River
River Subbasin: Roanoke River
Section: 6a
Class: III
Special Standards: NEW-1
7-Day, 10-Year Low Flow: 0.31 MGD 7-Day, 10-Year High Flow: 1.34 MGD
1-Day, 10-Year Low Flow: 0.26 MGD 1-Day, 10-Year High Flow: 1.19 MGD
30-Day, 5-Year Low Flow: 0.69 MGD 30-Day, 10 Year High Flow: 1.89 MGD
30-Day, 10-Year Low Flow: 0.49 MGD Harmonic Mean Flow: 2.51 MGD
Tidal: No 303(d) Listed: No

Attachment A contains a copy of the flow frequency determination memorandum.

6. **Operator License Requirements:** None
7. **Reliability Class:** NA
8. **Permit Characterization:**
 ☐ Private ☐ Interim Limits in Other Document
 ☐ Federal ☐ Possible Interstate Effect
 ☐ State
 ☒ POTW
 ☐ PVOTW
9. **Wastewater Treatment System:** A description of the treatment system is provided below. See **Attachment B** for treatment diagrams and **Attachment C** for a copy of the site inspection report. Treatment units associated with the discharge are listed in the table below.

Table I
DISCHARGE DESCRIPTION

Outfall Number/ Location	Discharge Source	Treatment (Unit by Unit)	Flow (Maximum 30 Day Average)
001 36°55'36" 79°51'20"	Combined process discharge of ground water and storm water	see treatment for internal outfalls 101 and 102	--
101 36°55'55" 79°51'33" (discharge from detention basin)	storm water	settling in detention basin	--
102 36°55'55" 79°51'33" (discharge below detention basin)	ground water from monitoring well treatment system at Franklin County Landfill	equalization tank (1,000 gallon) pH adjustment multi-tray air stripping system	0.0864 MGD

The Franklin County owns a sanitary landfill currently permitted under Solid Waste Permit Number 072. Ground water contamination has been found under the section of the landfill that was closed on February 1, 1995. Ground water data collected in November 2002 indicated contaminated ground water beneath the facility. A Corrective Action Plan (CAP) was developed in June 2004 and revised on April 2006. This CAP identified the source of the contaminants as

leachate from the unlined disposal area of the landfill. Chlorinated and aromatic hydrocarbons were detected in ground water monitoring wells in November 2005.

A three-pronged plume (northeastern, southeastern, and southwestern) has been identified in the uppermost aquifer beneath the landfill. The southeastern and southwestern prongs extend beyond the property boundary, and one offsite residential well has been contaminated. A point of entry treatment system was installed for this residence. Natural attenuation and monitoring is being used for the northeastern plume. A pump-and-treat system (PTS) will be designed to treat the ground water contamination plumes which are extending beyond the northeastern landfill property boundaries. The treatment system will remove volatile contaminants from the aquifer, provide hydraulic control of the ground water, and minimize further migration of the plume which extends beyond the property boundaries.

Ground water from a series of eighteen ground water extraction wells will be pumped to a 1,000 gallon equalization tank with pH adjustment. The pumping rates for the extraction wells are expected to average approximately 3.0 gpm. The ground water will be treated by a multi-tray stripper capable of operating at a flow rate of up to 120 gpm (172,800 MGD). The treated ground water will be discharged from a 4-inch diameter HDPE pipe into an intermittent stream which flows approximately 450 feet into the North Fork of Little Chestnut Creek at the property boundary. This ground water extraction system is expected to remain in operation until constituent concentrations have decreased to less than the ground water protection standards.

There is one storm water discharge from the landfill currently permitted under the general VPDES permit for storm water discharges associated with industrial activity (VAR050223). The requirements of the general permit have been incorporated into this VPDES individual permit. Once this permit is issued, the permittee's general permit may be terminated.

10. **Sewage Sludge Use or Disposal:** Not Applicable (All domestic wastewater is discharged to the sanitary sewer.)
11. **Discharge Location Description:** A USGS topographic map which indicates the discharge location, any significant dischargers, any water intakes, and other items of interest is included in **Attachment D**. The latitude and longitude for outfall 001 is N 36°55'55", E 79°51'31".

Name of Topo: Gladehill Number: 049A

12. **Material Storage:** The facility will store sodium hydroxide for pH adjustment onsite in a treatment building. See **Attachment C** for a list of storage tanks which include diesel fuel, waste oil, motor oil, hydraulic oil, and leachate.
13. **Ambient Water Quality Information:** Memoranda or other information which helped to develop permit conditions (special water quality studies, STORET data, and any other biological and/or chemical data, etc.) are listed below.

A proposed ground water treatment system at the Franklin County Sanitary Landfill will discharge into an intermittent stream which flows into the North Fork of Little Chestnut Creek at the property boundary. The stream is classified as Class III (Nontidal Water). Since the watershed of the intermittent stream is contained within the property boundaries, the outfall for this discharge occurs at the property boundary where the intermittent stream meets the North Fork of Little Chestnut Creek. Several flow measurements were made on Little Chestnut Creek from 1981 to 1984 at the Route 724 bridge near Sydnorsville, Virginia. Also, flow records are available from a continuous record gauge on the Pigg River near Sandy Level, Virginia. The flow frequencies from the reference gauge were plotted on a regression line and the associated flow frequencies at the measurement site were determined from the graph. The flow frequencies for outfall 001 were determined using proportional drainage areas. **Attachment A** contains a copy of the flow frequency determination memorandum.

The proposed discharge from the Franklin County Sanitary Landfill will flow into the Big Chestnut Creek/Little Chestnut Creek Watershed (VAW-L15R) as described in the 2004 Integrated Watershed Assessment Unit Summary (**Attachment E**). This segment has not been assessed for aquatic life or human health.

The Department of Conservation and Recreation's Division of Natural Heritage has designated a segment of stream located downstream of the discharge location a Stream Conservation Unit (SCU). This SCU (Big Chestnut Creek – Pigg River) has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern associated with this SCU include the yellow lampmussel, orangefin madtom, and Roanoke logperch. The Roanoke logperch is classified as endangered by the US Fish and Wildlife Service (USFWS) and the Virginia Department of Game and Inland Fisheries (VDGIF) but has not been confirmed below the discharge point. The logperch is listed as a federal endangered species but its presence has not been confirmed.

The downstream segment of Big Chestnut Creek has also been designated by VDGIF as "Threatened and Endangered Species Water." VDGIF's database lists the Roanoke hog sucker, Orangefin madtom, Atlantic pigtoe, Roanoke hog sucker, Bigeye jumprock, Roanoke bass, Wounded darter, Riverweed darter, and Appalachia Darter as species of concern. A copy of the Division of Natural Heritage report information and the DGIF information on species of concern in the area of the discharge is included in **Attachment E**.

14. **Antidegradation Review and Comments:** Tier I _____ Tier II X Tier III _____

The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier I or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier II water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier II waters is not allowed without an evaluation of the economic and social impacts. Tier III water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with Tier determination. The North Fork of Little Chestnut Creek is not listed on Part I of the 303(d) list for exceedances of water quality criteria in the segment where the discharge is located. This segment is determined to be a Tier II water, and no significant degradation of existing water quality is allowed. This determination is based on the fact that there are no data to indicate that this water is not better than the standards for all parameters that the Board has adopted criteria.

For purposes of aquatic life protection in Tier II waters, “significant degradation” means that no more than 25 percent of the difference between the acute and chronic aquatic criteria values and the existing quality (unused assimilative capacity) may be allocated. For purposes of human health protection, “significant degradation” means that no more than 10 percent of the difference between the human health criteria and the existing quality (unused assimilative capacity) may be allocated. The antidegradation baselines for aquatic life and human health are calculated for each pollutant as follows:

Antidegradation baseline (aquatic life) = 0.25 (WQS – existing quality) + existing quality

Antidegradation baseline (human health) = 0.10 (WQS – existing quality) + existing quality

Where:

“WQS” = Numeric criterion listed in 9 VAC 25-260-00 et seq. for the parameter analyzed

“Existing quality” = Concentration of the parameter being analyzed in the receiving stream

These “antidegradation baselines” become the new water quality criteria in Tier II waters and effluent limits must be written to maintain the antidegradation baselines for each pollutant. Antidegradation guidelines are applicable and have been applied to this permit issuance because it is a new discharge.

Water quality based effluent limits for pH have been established in compliance with antidegradation requirements set forth in 9 VAC 25-260-30 of the water quality standards regulations. In accordance with antidegradation policy, pH will be maintained within the range of 6.0 S.U. and 9.0 S.U.

Ground water monitoring well pH data found in **Attachment F** were used to determine the effluent 90th percentile pH value for the antidegradation wasteload allocation (AWLA) spreadsheet included in **Attachment G**. The effluent 90th percentile temperature value and average hardness were estimated based upon the receiving stream data (STORET Station 4ACNT001.32). The permit limits are in compliance with antidegradation requirements set forth in 9 VAC 25-260-30. This antidegradation review was conducted as described in Guidance Memorandum 00-2011 and complies with the antidegradation policy contained in Virginia's Water Quality Standards.

15. **Site Inspection:** Date: 12/4/06 Performed by: Becky L. France
Attachment C contains a copy of the site inspection memorandum.

16. **Effluent Screening and Limitation Development:** The Virginia Water Quality Standards (9 VAC 25-260-5 et seq.) have been evaluated using the procedures given in DEQ Guidance Memorandum 00-2011 to determine any water quality based limits needed to protect the existing uses of the receiving stream. The water quality criteria, critical stream flows, mixing zone factor, and effluent flows are used in a steady state mix equation to determine wasteload allocations for the receiving stream. The Agency statistical model determines that an effluent limit may be needed when the wasteload allocations are greater than the 97th percentile of the effluent data. Refer to **Attachment G** for the antidegradation wasteload allocation spreadsheet which provides water quality criteria, and wasteload allocations used in reasonable potential analysis. See **Table II** on pages 16-17 for a summary of limits and monitoring requirements.

In accordance with Section 402(a)(1)(B) of the Clean Water Act, 40 CFR Section 133, and 40 CFR Section 125.3(a)(1), the need for technology based limits has also been considered. This facility is subject to technology based limits for the storm water discharge from the landfill. An excerpt from the federal effluent guidelines for landfills (40 CFR 445.20) is included in **Attachment H**.

A. **Mixing Zone**

The MIXER program was run to determine the percentage of the receiving stream flow to be used when calculating the wasteload allocations (WLAs). The program output indicated that 100 percent of the 7Q10 and 100 percent of the 1Q10 may be used for calculating acute and chronic antidegradation wasteload allocations (AWLAs). A copy of the print out from the MIXER program is included in **Attachment G**.

B. **Outfall 001**

A proposed ground water treatment system at the Franklin County Sanitary Landfill will discharge into an intermittent stream which flows into the North Fork of Little Chestnut Creek at the property boundary. There is also one storm water discharge into this intermittent stream. Since the watershed of the intermittent stream is contained within the property boundaries, the intermittent stream is considered a conveyance for the purposes of the permit rather than a stream for which water quality standards apply. The process water and storm water is conveyed to the North Fork of Little Chestnut Creek which is at the property boundary. The water quality standards must be met at the point where this conveyance meets the North Fork of Little Chestnut Creek, and this point is designated as outfall 001. Outfall 001 contains both storm water and process water, and permit limits must be met before storm water and process water commingle. Therefore, it is necessary to designate internal outfalls for the storm water (101) and process ground water (102). All monitoring and associated limits are determined based upon the stream flow at outfall 001 and monitored at the internal outfalls.

C. Outfall 101

There is one currently permitted storm water discharge for the landfill. Outfall 101 discharges at the exit of the existing storm water detention basin. Storm water from the 73 acre site including the active landfill (Phases I, Phase II, and Phase III) flows into this basin. The storm water basin is located in an intermittent stream which is located entirely on the facility's property. Possible pollution sources include run-off from active landfill cells, construction demolition debris, tires, white goods, yard waste, and recyclables.

Due to the intermittent stream flow, there is flow from the basin that is not always associated with a storm event. Storm water monitoring for the permit shall be completed during times when the discharge from the basin is associated with runoff from the landfill during a storm event.

The requirements of the facility's general permit for storm water discharges associated with industrial activity (VAR050223) have incorporated into this individual VPDES permit so that the general permit may be terminated. **Attachment F** contains storm water data collected for the storm water general permit. The data collected in 2007 and 2006 were below the limitations in the permit, so the storm water monitoring frequencies will be continued at once per year as recommended by the VPDES Permit Manual.

Flow -- In conjunction with a storm water monitoring event, flow is to be estimated once per year.

pH -- The limits of 6.0 S.U. and 9.0 S.U. are based on federal effluent guidelines for RCRA Subtitle D Nonhazardous Waste Landfills (40 CFR 445.20, Subpart B) and are consistent with water quality standards. The monitoring frequency will continue at once per year via grab samples.

Biological Oxygen Demand (BOD₅) -- Limits of 37 mg/L monthly average and 140 mg/L daily maximum are based on the federal effluent guidelines for RCRA Subtitle D Nonhazardous Waste Landfill (40 CFR 445.20, Subpart B). The monitoring frequency will continue at once per year via grab samples.

Total Suspended Solids -- Limits of 27 mg/L monthly average and 88 mg/L daily maximum are based on the federal effluent guidelines for RCRA Subtitle D Nonhazardous Waste Landfill (40 CFR 445.20, Subpart B). The monitoring frequency will continue at once per year via grab samples.

Ammonia as N -- The limits of 4.9 mg/L monthly average and 10 mg/L daily maximum are based on federal effluent guidelines RCRA Subtitle D Nonhazardous Waste Landfill (40 CFR 445.20, Subpart B). The monitoring frequency will continue at once per year via grab samples.

Iron, Total Recoverable -- Iron data collected in 2001 and 2003 were above the benchmark value of 1.0 mg/L. However, no data were collected in 2004, 2005, 2006, or 2007. This benchmark value is not an effluent limit, but provides a comparative criteria for evaluating the effectiveness of installed best management practices (BMPs). More monitoring is needed to determine if BMPs are effective. Based upon the applicability of the Sector L Landfills, Land Application Sites, and Open Dumps Subcategory storm water monitoring requirements, annual storm water monitoring for total recoverable iron via grab has been included. If future monitoring data are above the benchmark value for iron, additional BMPs may be needed. Any changes to the best management practices shall be documented in the Storm Water Pollution Prevention Plan.

Zinc, Total Recoverable -- The limits of 110 µg/L monthly average and 200 µg/L daily maximum are based on federal effluent guidelines RCRA Subtitle D Nonhazardous Waste Landfill (40 CFR 445.20, Subpart B). The monitoring frequency will continue at once per year via grab samples.

Phenol -- The limits of 15 µg/L monthly average and 26 µg/L daily maximum are based on federal effluent guidelines RCRA Subtitle D Nonhazardous Waste Landfill (40 CFR 445.20, Subpart B). The monitoring frequency will continue at once per year via grab samples.

Alpha-Terpineol, Benzoic Acid, p-Cresol -- There are no Virginia water quality criteria for these parameters. The limits are based on federal effluent guidelines RCRA Subtitle D Nonhazardous Waste Landfill (40 CFR 445.20, Subpart B). The monitoring frequency is once per year via grab samples. Limits for these parameters are given in the table below:

Parameter	Monthly Average Limit	Daily Maximum Limit
Alpha-Terpineol	16 µg/l	33 µg/l
Benzoic Acid	71 µg/l	120 µg/l
p-Cresol	14 µg/l	25 µg/l

D. **Outfall 102**

Conventional Pollutants

A low BOD₅ value of 5 mg/L was given on the application. Since the source of effluent is ground water and there are no processes expected to exert an oxygen demand, BOD₅ limits are not needed.

Flow -- Flow is to be estimated and recorded once per month.

pH -- The pH limits of 6.0 S.U. minimum and 9.0 S.U. maximum are required. These limits are based upon the water quality criteria in 9 VAC 25-260-50 for Class III

receiving waters. Monitoring 1/month using grab samples is in accordance with the sampling guidelines in the VPDES Permit Manual.

Toxic Pollutants

The discharge must be evaluated to determine whether there is a reasonable potential for the effluent to violate the water quality standards (WQSs) adopted by the State Water Control Board (9 VAC 25-260 et. seq). **Attachment F** contains ground water data from individual monitoring wells submitted for volatile organic chemicals and metals.

There will be 18 ground water dewatering wells placed in various locations on the landfill site. The concentration from each well is expected to vary to some degree; however, the wells will be pumped at fairly constant rates and mixed prior to treatment. In that regard, both the raw water going to the treatment system and the final effluent are not expected to be highly variable. Within 6 months of commencement of discharge, the facility shall submit effluent data required in Form 2C.

Ammonia as nitrogen data of 0.04 mg/L, 0.03 mg/L, and <0.1 mg/L were submitted with the application. These data are significantly below the wasteload allocations for ammonia. Since these data do not represent the treatment system discharge, the Water Quality Criteria Special Condition (Part I.B.6) contains additional monitoring to determine if a limit is needed.

Volatile Organic Compounds (VOCs) -- The following chlorinated and aromatic hydrocarbons sampled in November 2005 were above the ground water protection standards:

benzene	4- naphthalene
chloroethane	tetrachloroethene
c,1,2-dichloroethene	trichloroethene
1,2-dichloropropane	vinyl chloride
methylene chloride	

None of these parameters were above the human health criteria for point source discharges. The air stripping system is expected to reduce VOCs from the proposed extraction wells to below the water quality criteria. The federal effluent guideline limitations for RCRA subtitle D nonhazardous waste landfills (Subtitle B, 40 CFR 445.24) required for storm water from outfall 901 do not apply to the discharge of treated contaminated ground water. Also, there are no Virginia water quality criteria for alpha terpineol, benzoic acid, or p-cresol. The human health criterion for phenol is 46,000 mg/L. It is anticipated that since phenol is a volatile chemical, the concentration following air stripping will be well below the human health criterion for phenol. The Water Quality Criteria Monitoring Special Condition (Part I.B.6) requires that data be collected for total phenol.

Chromium VI, Lead, Nickel, Selenium, Zinc, Hardness as Calcium Carbonate -- The effluent for the water quality criteria will be a composite of the eighteen ground water extraction wells (different from the wells previously monitored); therefore, dissolved metals data from the treatment system will be needed to determine if there is a potential to exceed the metal water quality criteria.

Arsenic, cadmium, chromium VI, copper, lead, nickel, selenium, and zinc were detected above the quantification levels but below the ground water protection standards. At least one data point was significantly above the associated dissolved metal criteria for chromium VI, lead, nickel, selenium, and zinc. To determine if there is a potential to exceed water quality criteria, monthly effluent monitoring for one year for chromium VI, dissolved lead, dissolved nickel, dissolved selenium, dissolved zinc, and hardness shall be required. Hardness information will be used in the calculation of the water quality criteria for the metals. The Agency's STATS program may predict the potential to exceed a wasteload allocation based upon one data point just below the wasteload allocation. Twelve data points are being required to ensure an adequate statistical distribution for the STATS program. Should limits be determined necessary, the permit may be modified in accordance with permit condition Part I.B.5.

Whole Effluent Toxicity -- This discharge has been included in the Toxics Management Program based upon the 4953 SIC Code. The whole effluent toxicity testing data will be analyzed to determine if there is a potential to affect aquatic life. Should a whole effluent toxicity limit be deemed necessary, the permit may be modified to include a toxicity limit. See **Attachment I** for the Toxics Management Program Justification Memorandum.

17. **Antibacksliding Statement:** This permit is an issuance for a proposed facility. No permit limits in the facility's storm water general permit (VAR050223) are more stringent than the limits in this individual permit. Therefore, this permit issuance complies with the antibacksliding requirements of 9 VAC 25-31-220 L of the VPDES Permit Regulation.
18. **Compliance Schedule:** For this issuance, there are no compliance schedules.
19. **Special Conditions:** A brief rationale for each special condition contained in the permit is given below.

A. **Notification Levels (Part I.B.1)**

Rationale: The VPDES permit regulation was revised in July of 1996 (VPDES Regulation 9 VAC 25-31-200A). The permit boiler plate (Parts II and III) was revised to contain only those conditions applicable to all VPDES permits. The Notification Levels Special Condition is no longer included in the new boiler plate (Part II) and is added to all industrial permits for manufacturing, mining, commercial, and silvicultural dischargers. This special condition requires that a permittee notify the DEQ of any changes in effluent quality or the presence of certain pollutants in the effluent.

B. Operations and Maintenance Manual Requirement (Part I.B.2)

Rationale: The Code of Virginia Section 62.1-44.16, VPDES Permit Regulation, 9 VAC 25-31-190 E, and 40 CFR 122.41(e) require proper operation and maintenance of the permitted facility. Section 40 of the Clean Water Act requires the permittee to provide an opportunity for the State to review the operations of the treatment facility. Compliance with an approved manual ensures these requirements are met.

C. Materials Handling/Storage (Part I.B.3)

Rationale: 9 VAC 25-30-50A prohibits the discharge of any wastes into State waters unless authorized by permit. The Code of Virginia § 62.1-44.16 and 62.1-44.17 authorized the Board to regulate the discharge of industrial waste or other waste. State Water Control Law § 62.1-44.18:2 authorizes the Board to prohibit any waste discharge that would threaten public health or safety, interfere with or be incompatible with treatment works or water use.

D. Nutrient Enriched Waters Reopener (Part I.B.4)

Rationale: The Policy for Nutrient Enriched Waters (9 VAC 25-40-10) allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy anticipates that future total phosphorus and total nitrogen limits may be needed.

E. Water Quality Criteria Reopener (Part I.B.5)

Rationale: The State Water Control Law Section 62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters.

F. Water Quality Criteria Monitoring (Part I.B.6)

Rationale: State Water Control Law Section 62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. To ensure that water quality standards are maintained, the permittee is required to analyze the facility's effluent for the substances noted. Monitoring shall be conducted within one year of commencement of discharge.

G. Compliance Reporting under Part I.A (Part I.B.7)

Rationale: In accordance with VPDES Permit Regulation, 9 VAC 25-31-190 J4 and 220 I, DEQ is authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR Part 130, Water Quality Planning and Management, Subpart 130.4. This condition is necessary when toxic pollutants are monitored by the permittee and a maximum level of quantification and/or specific analytical method is required in order to assess compliance with a permit limit or to

compare effluent quality with a numeric criterion. This condition also establishes protocols for calculation of reported values.

H. New Discharges Permitted from Form 2D (Part I.B.8)

Rationale: The permit limitations are based on assumed effluent quality characteristics when application Forms 2D are used. These assumptions (and the permit basis) can only be validated with actual effluent data. The submission of actual Form 2C data for outfall 102 is required in the application form instructions.

I. Total Maximum Daily Load (TMDL) Reopener (Part I.B.9)

Rationale: Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under Section 303 of the Act.

J. Notification of Discharge (Part I.B.10)

Rationale: Notification of regional DEQ staff when discharge begins is necessary to enter permit compliance dates and initiate CEDS database tracking of Discharge Monitoring Report (DMR) data.

K. Orangefin Madtom and Roanoke Logperch Habitat Assessment (Part I.B.11)

Rationale: The Orangefin madtom (*Noturus gilberti*) has been classified as a state threatened species associated with Big Chestnut Creek which is downstream of the discharge. The Roanoke logperch (*Percina rex*) is a federal endangered species endemic to the Roanoke River watershed. A habitat assessment is needed to identify if suitable habitat is available for these species. If suitable habitat is found, a survey is needed to identify if these species are found downstream of the proposed discharge. Persons conducting the survey must have a Threatened or Endangered Collection Permit issued by the Department of Game and Inland Fisheries (DGIF). DGIF maintains a list of preapproved surveyors. The assessment report shall be submitted to DGIF offices in Blacksburg and Richmond and the regional DEQ office within 120 days from the effective date of the permit. If suitable habitat is identified, a survey to identify species shall be conducted and the report shall be submitted to the DGIF offices in Blacksburg and Richmond and the regional DEQ office within 210 days from the effective date of the permit.

L. Threatened or Endangered Species Reopener (Part I.B.12)

Rationale: The antidegradation wasteload allocations allow a mixing zone for chemical specific parameter based upon the assumption that there will be no endangered species present in the proposed discharge mixing zone. These wasteload allocations are used to calculate whether water quality based limits are needed in the permit. In accordance with 9 VAC 25-31-390, if new information become available that show threatened or endangered species to be present downstream of the proposed discharge, then the need for water quality standard based effluent limitations will need to be reevaluated using factors that provide additional protection for these species.

M. Toxics Management Program (Part I.C)

Rationale: Solid waste landfill facilities are required to conduct toxics monitoring because they discharge potentially toxic storm water, in accordance with 9 VAC 25-31-10 et seq. and the VPDES Permit Manual. VPDES Permit Regulation, 9 VAC 25-31-210 and 220.I requires monitoring in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and Clean Water Act.

Within three months of commencement of discharge, the permittee shall conduct quarterly acute and chronic toxicity testing using *C. dubia* and *P. promelas* until 10 sets of data are collected. If after evaluating the data, it is determined that no limit is needed, the permittee shall begin conducting annual testing thereafter as given in the permit schedule.

N. General Storm Water Special Conditions (Part I.D)

Rationale: This requirement is based upon the VPDES Permit Regulation, 9 VAC 25-31-120B which requires that quantitative data be provided for storm water discharges associated with industrial activity. The VPDES Storm Water General Permit Regulation provides the format for Parts I.D.2 through I.D.8 of the permit. Visual quarterly inspections are required for outfalls associated with industrial activity. These requirements are taken from the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

O. Storm Water Pollution Prevention Plan (Part I.E)

Rationale: VPDES Permit Regulation, 9 VAC 25-31-10 defines discharges of storm water from industrial activity in 9 industrial categories. 9 VAC 25-31-120 requires a permit for these discharges. The Storm Water Pollution Prevention Plan requirements of the permit are derived from the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq. VPDES Permit Regulation, 9 VAC 25-31-220K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numeric effluent limits are infeasible or the practices are necessary to achieve effluent limits or to carry out the purpose and intent of the Clean Water Act and State Water Control Law.

P. **Conditions Applicable to All VPDES Permits (Part II)**

Rationale: VPDES Permit Regulation, 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

20. **NPDES Permit Rating Worksheet:** Total Score: 65

In accordance with the VPDES Permit Manual, the NPDES Permit Rating Worksheet has been completed, and this facility has been classified as an industrial minor permit. The completed worksheet is found in **Attachment J**.

21. **Changes to the Permit:** Since this permit is for an issuance for a proposed facility, there are no changes.

22. **Variances/Alternate Limits or Conditions:** No variances or alternate limits or conditions are included in this permit. The submission of grab and composite storm water data for Form 2F for oil and grease, COD, total nitrogen, and total phosphorus has been waived. The submission of composite storm water data has also been waived for BOD₅ and total suspended solids. These waivers were granted because the parameters were not considered of material importance to the permit, and the permit already has storm water limits.

23. **Public Notice Information required by 9 VAC 25-31-290 D:**

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Becky L. France at:

Virginia DEQ, West Central Regional Office
3019 Peters Creek Road
Roanoke, VA 24019
540-562-6700
blfrance@deq.virginia.gov

Persons may comment in writing or by e-mail to the DEQ on the proposed permit action and may request a public hearing during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing, and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action.

Following the comment period, the DEQ will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

24. **303(d) Listed Segments (TMDL):** This facility discharges directly to the North Fork of Little Chestnut Creek. The stream segment receiving the effluent is not listed on the current 303(d) list; therefore, no Total Maximum Daily Loads (TMDLs) have been or are being developed for this segment.
25. **Additional Comments:**
- A. **Previous Board Action:** None
- B. **Staff Comments:** The discharge is not controversial. The discharge is not addressed in any planning document, but will be included, if applicable, when the plan is updated.
- The permit is being issued for a period of less than five years to even out the DEQ staff permit writing workload.
- C. **Public Comments:** The Department of Game and Inland Fisheries (DGIF) commented on the draft permit. They recommended a habitat assessment from the point of discharge through 500 meters downstream to determine if suitable habitat is available for endangered species. These recommendations have added to special condition (Part I.B.12) of the permit. See **Attachment E** for a copy of the DGIF comments.
- D. **Tables:**
- | | |
|----------|--|
| Table I | Discharge Description (Page 2) |
| Table II | Basis for Monitoring Requirements (Page 16-17) |
- E. **Attachments:**
- A. Flow Frequency Memorandum
 - B. Treatment Diagrams
 - C. Site Inspection Report
 - D. Maps
 - E. Ambient Water Quality Information
 - 2004 Integrated Watershed Assessment Unit Summary (Excerpt)
 - STORET Data (4ACNT001.32, 4ALNF002.57, 4ALNF002.18)
 - Endangered Species Information
 - F. Ground Water and Storm Water Monitoring Results
 - G. Wasteload Calculations
 - Mixing Zone Output (MIXER 2.1)
 - Antidegradation Wasteload Allocation Spreadsheet
 - H. Federal Effluent Guidelines for RCRA Subtitle D Nonhazardous Waste Landfills (40 CFR 445.20 Subpart B)
 - I. Toxics Management Program Justification Memorandum
 - J. NPDES Permit Rating Worksheet
 - K. Public Notice
 - L. EPA Review Checklist

Table II-1
BASIS FOR LIMITATIONS -- INDUSTRIAL

() Interim Limitations
(X) Final Limitations

OUTFALL: 101
SIC Code: 4953

Effective Dates - From: Effective Date
To: Expiration Date

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow, Precipitation Event (MG)	NA	NA	NA	NA	NL	1/Year	Estimate
pH (Standard Units)	1,3	NA	NA	6.0	9.0	1/Year	Grab
BOD ₅	3	37 mg/L	NA	NA	140 mg/L	1/Year	Grab
Total Suspended Solids	3	27 mg/L	NA	NA	88 mg/L	1/Year	Grab
Ammonia as Nitrogen	3	4.9 mg/L	NA	NA	10 mg/L	1/Year	Grab
Alpha Terpineol	3	16 µg/L	NA	NA	33 µg/L	1/Year	Grab
Benzoic Acid	3	71 µg/L	NA	NA	120 µg/L	1/Year	Grab
Phenol	3	15 µg/L	NA	NA	26 µg/L	1/Year	Grab
Total Recoverable Zinc	3	110 µg/L	NA	NA	200 µg/L	1/Year	Grab
Total Recoverable Iron	2	NA	NA	NA	NL mg/L	1/Year	Grab
p-Cresol	3	14 µg/L	NA	NA	25 µg/L	1/Year	Grab

NA Not Applicable

NL No Limitations; monitoring only

The basis for the limitations codes are:

1. Water Quality Criteria
2. Sector L Landfills, Land Application Sites, and Open Dumps
3. Federal Effluent Guidelines (40 CFR 445.20 Subpart B)

Table II -2
BASIS FOR LIMITATIONS – INDUSTRIAL

() Interim Limitations
(X) Final Limitations

OUTFALL: 102
SIC Code: 4953

Effective Dates - From: Commencement of Discharge
To: Expiration Date

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITS			MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/Month Estimate
pH (Standard Units)	1	NA	NA	6.0	9.0	1/Month Grab
Hardness as Calcium Carbonate	1	NL µg/L	NA	NA	NL µg/L	1/Month* Grab
Dissolved Lead	1	NL µg/L	NA	NA	NL µg/L	1/Month* Grab
Dissolved Cadmium	1	NL µg/L	NA	NA	NL µg/L	1/Month* Grab
Dissolved Nickel	1	NL µg/L	NA	NA	NL µg/L	1/Month* Grab
Dissolved Selenium	1	NL µg/L	NA	NA	NL µg/L	1/Month* Grab
Dissolved Zinc	1	NL µg/L	NA	NA	NL µg/L	1/Month* Grab

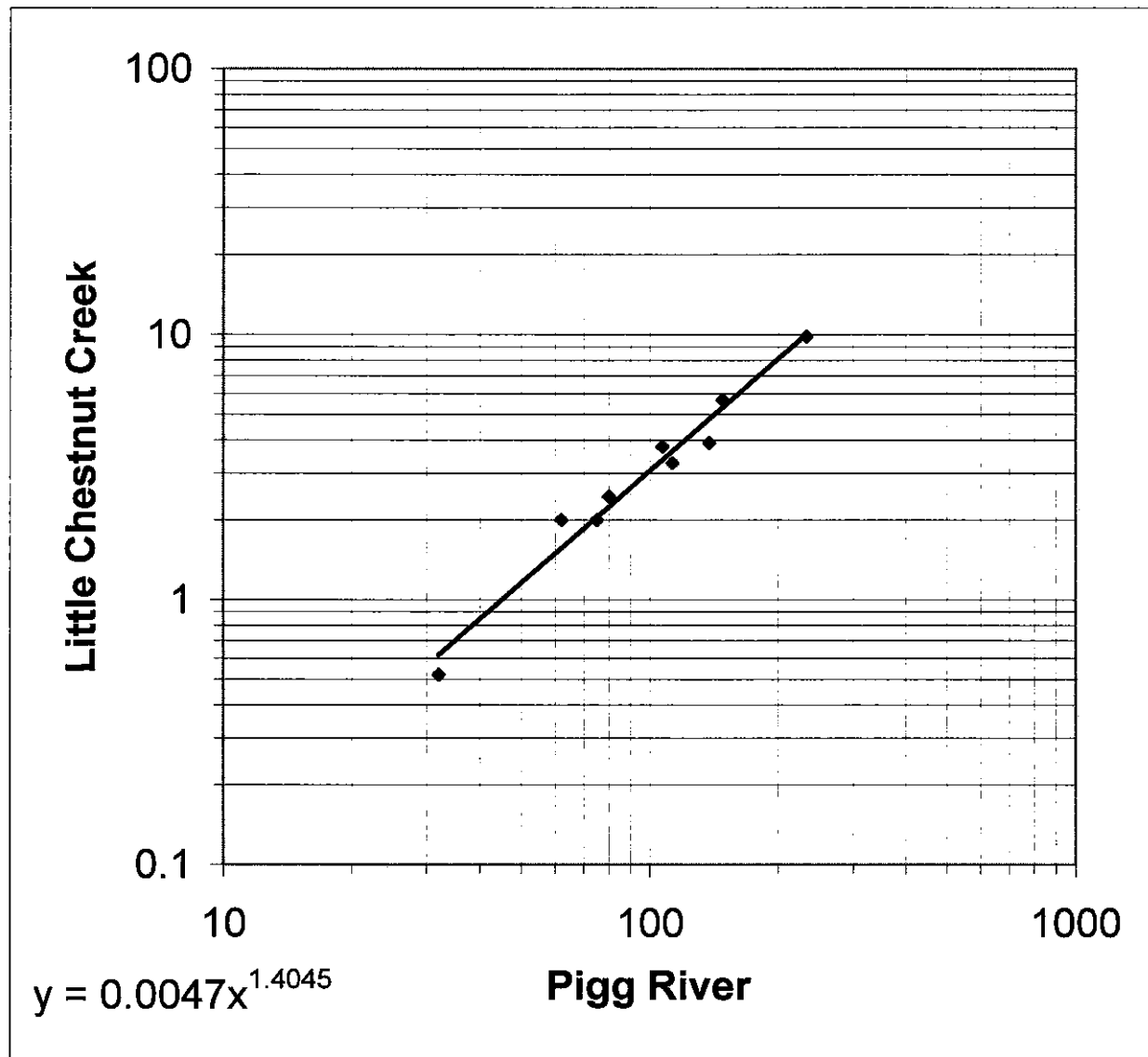
NA = Not Applicable
NL = No Limitations; monitoring only
1/Month* = 1/month for 12 months

The basis for the limitations codes are:
1. Water Quality Criteria
2. Best Professional Judgment

Attachment A

Flow Frequency Memorandum

Little Chestnut Creek at Route 724, near Sydnorsville, VA #02057750
vs Pigg River near Sandy Level, VA #02058400



Flow Data (cfs)		
Date	Pigg	L. Chestnut
8/25/1981	32	0.52
9/22/1981	75	2
10/22/1981	62	2
7/20/1982	138	3.9
10/20/1982	107	3.78
8/4/1983	113	3.28
9/26/1983	80	2.45
11/9/1983	148	5.66
8/21/1984	233	9.84

SUMMARY OUTPUT

Regression Statistics

Multiple R 0.980852
R Square 0.962071
Adjusted R 0.956653
Standard E 0.566446

Observations 9

Flow Frequencies (cfs)

Pigg		L. Chestnut
42	1Q10	0.895
47	7Q10	1.048
83	30Q5	2.330
65	30Q10	1.653
123	HF 1Q10	4.049
134	HF 7Q10	4.567
209	HM	8.526
383	ANN AVG	19.962
171	HF30Q10	6.432
350 mi ²	DA	15.49 mi ²
	Jan-May	

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
3019 Peters Creek Road, Roanoke, Virginia 24019

SUBJECT: Flow Frequency Determination
Franklin County Sanitary Landfill – Issuance (VA0092142)

TO: Permit File

FROM: Becky L. France, Environmental Engineer Senior *BLF*

DATE: October 30, 2007 (Revised 1/7/08)

COPIES:

The Franklin County Sanitary Landfill discharges to the North Fork of Little Chestnut Creek near Rocky Mount, Virginia. There is an intermittent stream on the landfill property that is a conveyance of storm water and process water from the site to the outfall which is at the confluence of the North Fork of Little Chestnut Creek. Stream flow frequencies are required at this site to develop effluent limitations for the VPDES permit.

The USGS conducted several flow measurements on Little Chestnut Creek from 1981 to 1984. The measurements were made just above the Route 724 bridge near Sydnorsville, VA. The measurements correlated very well with the same day daily mean values from the continuous record gauge on the Pigg River near Sandy Level, VA #02058400. The measurements and daily mean values were plotted on a logarithmic graph and a best fit line was drawn through the data points. The required flow frequencies from the reference gauge were plotted on the regression line and the associated flow frequencies at the measurement site were calculated. The values for the measurement site were projected to the discharge point (outfall 001) using proportional drainage areas. This analysis assumes there are no significant discharges, withdrawals, or springs influencing the flow in the North Fork of Chestnut Creek upstream of the proposed discharge point. The high flows are January through May. Flow frequencies for the reference gauge, the measurement site, and the discharge point are listed on the attached tables.

Reference Gauge (data from 1963 to 2003)					
Pigg River near Sandy Level, VA (#02058400)					
Drainage Area [mi ²] =		350	mi ²		
	ft ³ /s	MGD		ft ³ /s	MGD
1Q10 =	42	27.14	High Flow 1Q10 =	123	79.49
7Q10 =	47	30.37	High Flow 7Q10 =	134	86.60
30Q5 =	83	53.64	High Flow 30Q10 =	171	110.51
30Q10 =	65	42.01	HM =	209	135.07

Flow frequencies from Regression Analysis					
Little Chestnut Creek near Sydnorsville, VA (#02057050)					
Drainage Area [mi ²] =		15.49	mi ²		
	ft ³ /s	MGD		ft ³ /s	MGD
1Q10 =	0.90	0.58	High Flow 1Q10 =	4.05	2.62
7Q10 =	1.05	0.68	High Flow 7Q10 =	4.57	2.95
30Q5 =	2.33	1.51	High Flow 30Q10	6.43	4.16
30Q10 =	1.65	1.07	HM =	8.53	5.51

Flow frequencies for the permit issuance					
North Fork Little Chestnut Creek above discharge point					
Drainage Area [mi ²] =		7.05	mi ²		
	ft ³ /s	MGD		ft ³ /s	MGD
1Q10 =	0.41	0.26	High Flow 1Q10 =	1.84	1.19
7Q10 =	0.48	0.31	High Flow 7Q10 =	2.08	1.34
30Q5 =	1.06	0.69	High Flow 30Q10	2.93	1.89
30Q10 =	0.75	0.49	HM =	3.88	2.51

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.9808523
R Square	0.9620713
Adjusted R Square	0.9566529
Standard Error	0.5664458
Observations	9

Little Chestnut Creek at Route 724, near Sydnorsville, VA #02057750
vs Pigg River near Sandy Level, VA #02058400

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	56.970996	56.970996	177.5567	3.13929E-06
Residual	7	2.2460261	0.3208609		
Total	8	59.217022			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.24732	0.4174998	-2.987593	0.0202954	-2.234549188	-0.26009	-2.234549	-0.26009024
X Variable 1	0.0451983	0.003392	13.32504	3.139E-06	0.037177506	0.053219	0.0371775	0.05321901

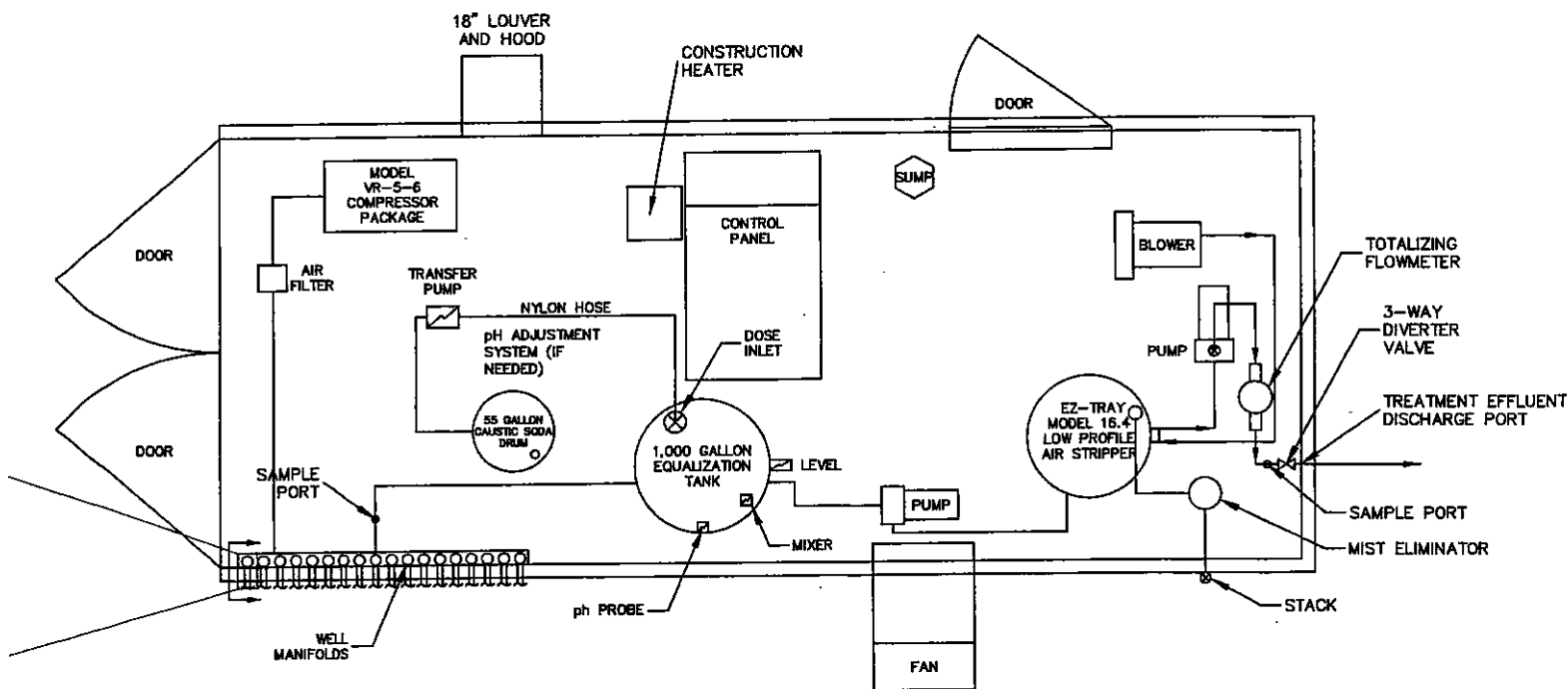
Gauging Station #02058400

Pigg River near Sandy Level, VA

RECORD	DAAREA	HARMEAN	HF30Q10	HF7Q10	HF1Q10	Z30Q5	Z30Q10	Z7Q10	Z1Q10	Z1Q30	HFMTHS	STATPERIOD	YRSTRN
R. 1963-	350	209	171	134	123	83	65	47	42	27	JAN-MAY	1963-2003	2005

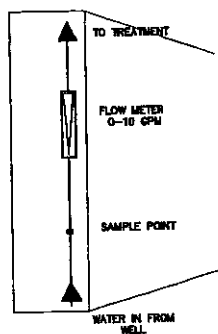
Attachment B

Treatment Diagrams

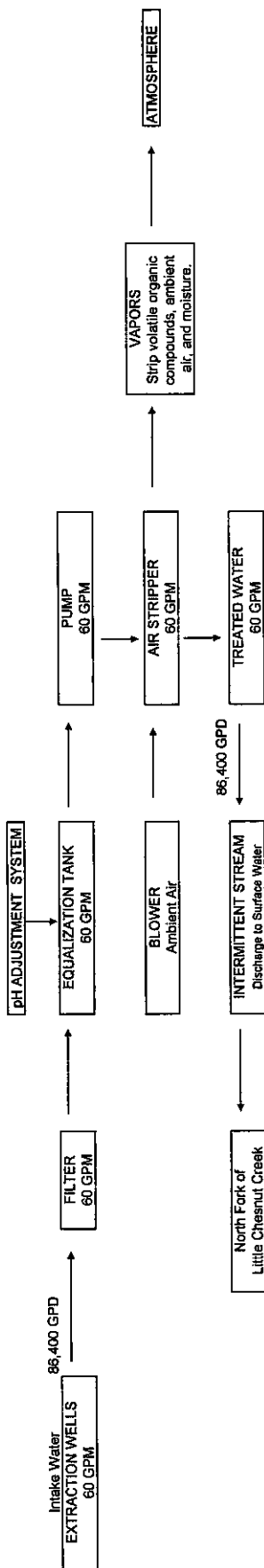


TREATMENT BUILDING PLAN

N.T.S.



FRANKLIN COUNTY SANITARY LANDFILL, PERMIT NO. 72
PUMP-AND-TREAT SYSTEM SCHEMATIC



GPM = GALLONS PER MINUTE
GPD = GALLONS PER DAY



Attachment C

Site Inspection Report

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY *West Central Regional Office*

3019 Peters Creek Road

Roanoke, VA 24019

SUBJECT: Site Inspection Report for Franklin County Sanitary Landfill
Issuance of VPDES Permit

TO: Permit File

FROM: Becky L. France, Environmental Engineer Senior *BLF*

DATE: December 13, 2006

On December 4, 2006, a DEQ site inspection was conducted at the Franklin County Sanitary Landfill. Timothy Kelly and Van Burbach of Joyce Engineering and Barry Sink, Landfill Supervisor, were present at the site visit. The current active cell is expected to be open for another 5 years before another cell is to be opened. The landfill receives an average of 160 tons per day of garbage. The purpose of the site visit was to examine the source of storm water and the stream receiving the discharges from the facility.

Franklin County Sanitary Landfill is currently permitted under Solid Waste Permit Number 072. Ground water data collected in November 2002 indicated contaminated ground water beneath the older unlined section of the landfill that was closed on February 1, 1995. A Corrective Action Plan (CAP) was developed in June of 2004 and revised in April of 2006. This CAP identified the source of the contaminants as leachate from the unlined disposal area of the landfill. Chlorinated and aromatic hydrocarbons were detected in ground water monitoring wells in November 2005. A pump-and-treat system (PTS) is proposed to treat the ground water contamination prongs which are extending beyond the northeastern landfill property boundaries. This proposed treatment system will be located in the southwestern quadrant of the property.

Ground Water Treatment

Ground water from a series of eighteen extraction wells will be pumped to a 1,000 gallon equalization tank with pH adjustment. The pumping rates for the extraction wells are expected to average approximately 60 gpm. The ground water will be treated by a multi-tray stripper capable of operating at a flow rate of up to 120 gpm (172,800 MGD). The treated ground water will be discharged from a 4-inch diameter HDPE pipe into an intermittent stream which flows approximately 450 feet to the North Fork of Little Chestnut Creek. This ground water extraction system is expected to remain in operation until constituent concentrations have decreased to less than the ground water protection standards.

Storm Water

The storm water discharge from the landfill is currently permitted under the general VPDES permit for storm water discharges associated with industrial activity (VAR050223). Once this permit is issued, the permittee's general permit may be terminated.


There is an eroded channel at the base of the active landfill cell through which storm water flows. An intermittent tributary receives runoff from this eroded channel as well as a slope drain from the active landfill cell. This tributary begins on the landfill property and is located approximately 600 feet from the top of the active part of the landfill. Mr. Kelly said that the stream sometimes ceased to flow during dry spells during the summer. The stream was about 6 feet wide and had some flow at the time of the site visit. The sides of intermittent stream were ripped. The stream bed was heavily laden with sediment and had an orangey clay color. There was some debris and plastic in the stream at the head.

There were some trees along the edge of the stream but little vegetation. This stream severely meanders toward an instream sediment basin. There was a great deal of sediment along the edges of the stream and at the entrance to the basin which appeared to be at least half full with sediment. Mr. Kelley said that the sediment basin had been cleaned out about a year ago and would probably be cleaned out again in the summer. Following the sediment basin there were additional sediment deposits. About 50 feet from the convergence with the North Fork of Little Chestnut Creek the stream bed lost the orangey color.

Outfall 001 is located at the confluence with the North Fork of Little Chestnut Creek. This perennial stream appeared to be about 15 feet wide with a silt stream bed and trees on the sides of the banks. The stream moderately meandered. Monitoring wells 16D and 16S are located near the stream bank near the confluence. The North Fork of Little Chestnut Creek was also observed upstream from the discharge at the point where it crosses Route 220. The stream bed was about 6 feet wide and contained a few pebbles in addition to silt.

Attachment D

Maps



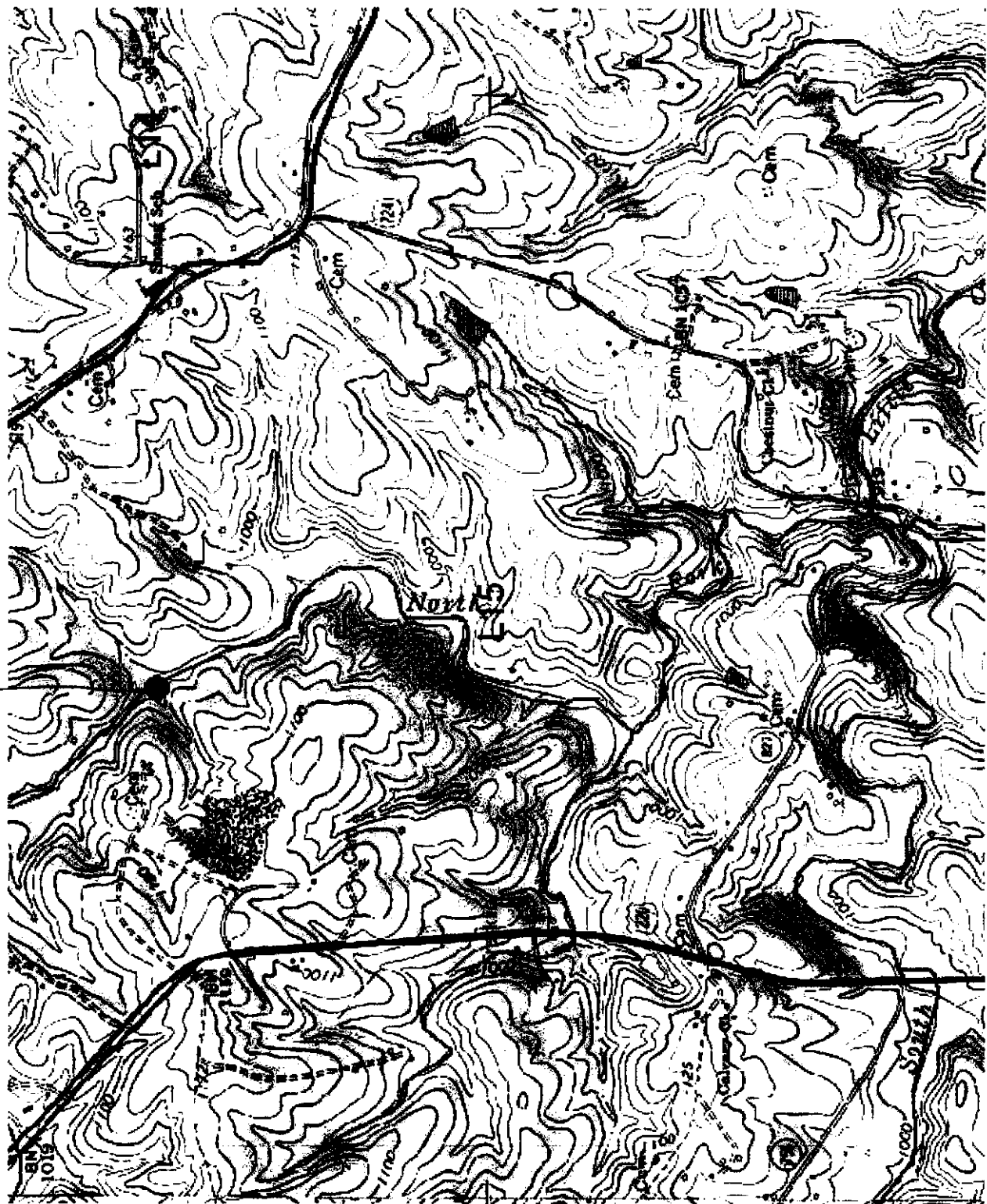
Map Key	Feature	Distance from Treatment System	Distance from Discharge Point
1	Nearest Residence	950 feet	3100 feet
1	Nearest Potable Well (private)	1000 feet	3100 feet
2	Nearest Potable Well (public)	NA (> 2000 ft.)	3900 feet
3	Nearest Potable Water Pipeline	100 feet	2500 feet
4	Nearest Recreation Area	1200 feet	2400 feet
5	Nearest Wetlands	NA (> 2000 ft.)	800-1000 feet
	Nearest Downstream Community	NA (> 2000 ft.)	2.5 miles
	Nearest Water Intake	NA (> 2000 ft.)	NA (> 15 mi.)
	Nearest Downstream Impoundment	NA (> 2000 ft.)	NA (> 15 mi.)
	Nearest Downstream Recreation Area	NA (> 2000 ft.)	NA (> 15 mi.)
	Nearest Shellfish Waters	NA (> 2000 ft.)	NA (> 15 mi.)
	(NOTE: All distances are approximate.)		

DESIGNED VB
DRAWN CADD/RFB
CHECKED VB



COUNTY SANITARY LANDFILL
KLIN COUNTY, VIRGINIA

outfall 001

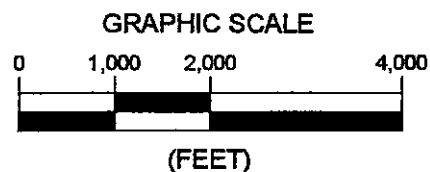


Franklin County Sanitary Landfill



USGS MAP SOURCE
7.5 MIN. QUADRANGLES:
GLADEHILL, REVISED 1985
ROCKY MOUNT, REVISED 1990

VICINITY MAP
1"=2,000'



JOICE
ENGINEERING, INC.

1904 OWNBY LANE
RICHMOND, VA 23220
PHONE: (804) 355-4520

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SCALE
AS SHOWN

PROJECT NO.
459.02

FRANKLIN COUNTY SANITARY LANDFILL
VPDES APPLICATION SITE MAP
DRAWING 1

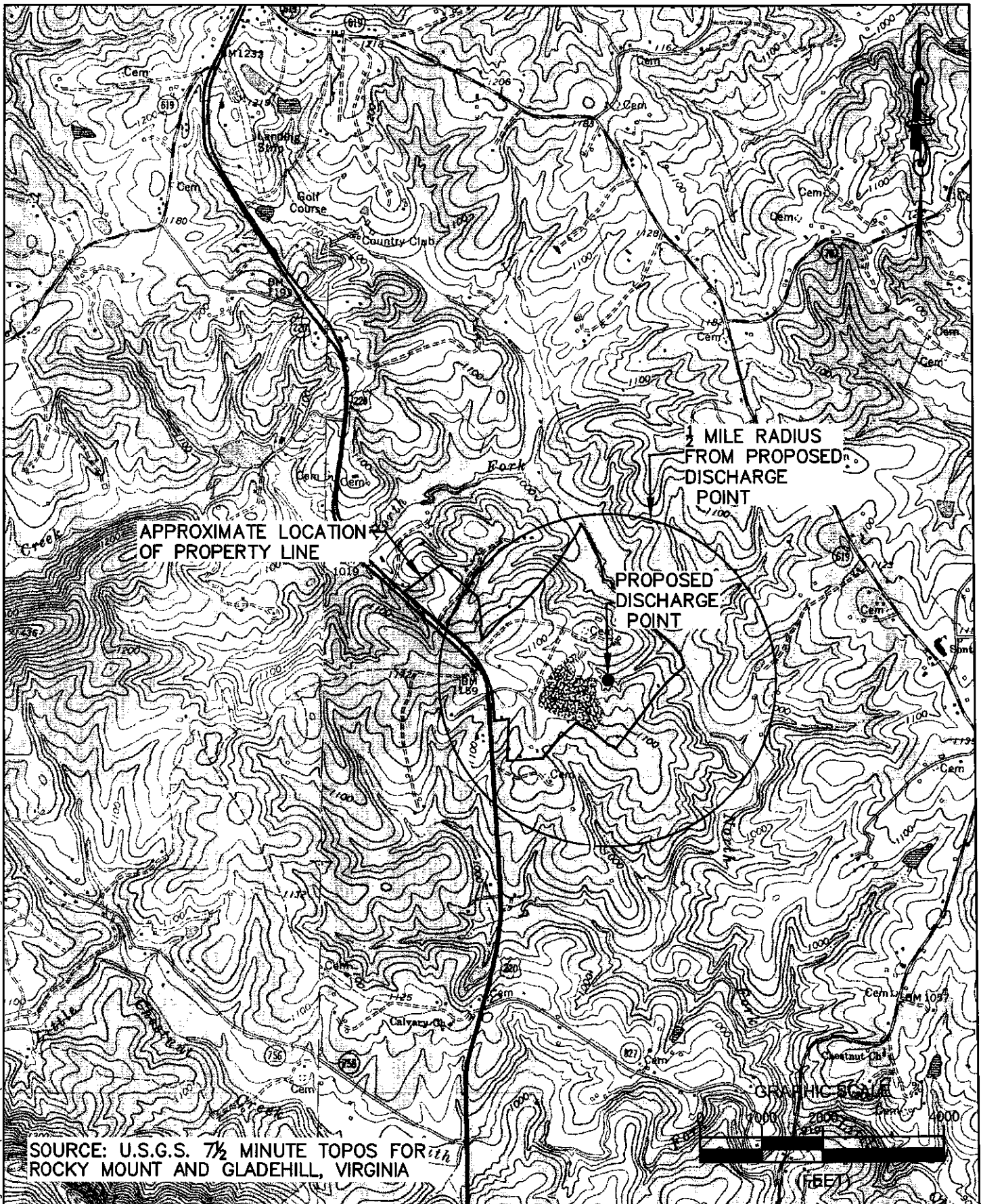


FIGURE NO. 1

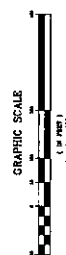
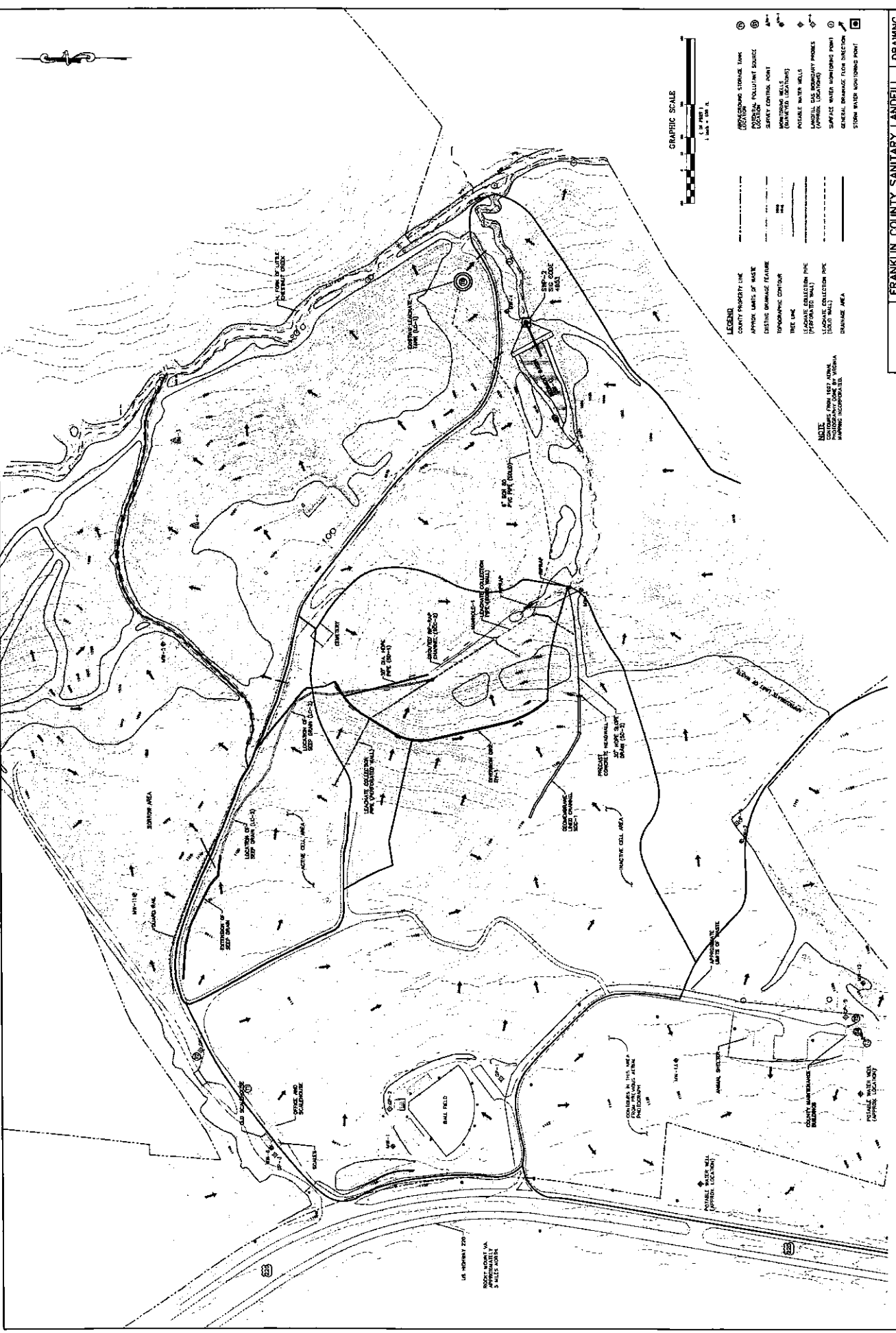
JOKE
ENGINEERING, INC.

2301 WEST MEADOWVIEW ROAD
GREENSBORO, N.C. 27407
PHONE: (336) 323-0082
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SCALE
1"=2000'

PROJECT NO.
459.18

FRANKLIN COUNTY LANDFILL
FRANKLIN COUNTY, VIRGINIA
DISCHARGE LOCATION MAP



- LEGEND**
- COUNTY PROPERTY LINE
 - ADJACENT UNITS OF WASTE
 - EXISTING DRAINAGE FEATURE
 - TOPOGRAPHIC CONTOUR
 - PIPE LINE
 - LEACHATE COLLECTION PIPE (PREPARED WALL)
 - LEACHATE COLLECTION PIPE (SLOTTED WALL)
 - STORM WATER COLLECTION PIPE
 - STORM WATER DETENTION POND
 - STORM WATER MONITORING POINT
 - EXISTING STORAGE TANK
 - POTENTIAL POLLUTANT SOURCE
 - SEWAGE TREATMENT PLANT
 - POTENTIAL WATER WELLS
 - POTENTIAL WATER WELLS (UNSATURATED ZONE)
 - STORM WATER COLLECTION POND
 - STORM WATER DETENTION POND

NOTE:
CONTAINERS FROM TEST AREN'T
SHOWN IN THIS MAP
BUT ARE LOCATED IN THE
LANDFILL AREA

FRANKLIN COUNTY SANITARY LANDFILL FRANKLIN COUNTY, VIRGINIA		DRAWING NO. 2
PROJECT NO. 179.26		SCALE 1"=100'
DESIGNED BY DRAWN BY CHECKED BY APPROVED BY		DATE 09/20/99
REVISIONS AND RECORD OF ISSUE		NOTATION
DATE	REVISIONS AND RECORD OF ISSUE	NOTATION

Franklin County Sanitary Landfill
VA0092142

Outfall Drainage Area Calculations (Planimeter Units)

	Start	End
1	0	1.560
2	0	1.564
3	0	1.564
4	0	1.570
5	0	1.560
6	0	1.564

Average 1.564
STDEV 0.00367
RSD% 0.235 %

X (miles)= 1.564 units/(0.698 units/mi²) = 2.241 mi²

Drainage area from discharge at landfill to Franklin County Commerce Center (VA0091103)	2.241 mi ²
Drainage area above Franklin County Commerce Center	4.81 mi ²
Total Drainage Area	7.05 mi²

Attachment E

Ambient Water Quality Information

- **2004 Integrated Watershed Assessment Summary (Excerpt)**
- **STORET Data (4ACNT001.32, ALNF002.57, ALNF002.18)**
- **Endangered Species Information**

2004 Integrated Report Watershed Assessment Unit Summary

Watershed ID: **VAW-L15R** BIG CHESTNUT CREEK/LITTLE CHESTNUT CREEK

Assessment Unit (AU)	TMDL ID	Overall AU Category	Stream & AU Description	AU Size
VAW-L15R_CNT01A00	VAW-L15R-01	5A	Big Chestnut Creek mainstem from its mouth on the Pigg River upstream to the confluence of Little Chestnut Creek.	12.88 MILES
VAW-L15R_CTO01A04		2A	Headwaters of Canton Creek downstream to an unnamed tributary at 36°52'35" / 79°55'04".	2.38 MILES
VAW-L15R_LNT01A04		2A	Little Chestnut Creek from the confluence of the Northh and South Forks downstream to its mouth on Big Chestnut Creek.	1.78 MILES
VAW-L15R_ZZZ01A00		3A	Remaining waters in watershed L15R.	95.22 MILES

VAW-L15R

OVERALL 2004 WATERSHED SUMMARY *

Total Watershed Size:

BIG CHESTNUT CREEK/LITTLE CHESTNUT CREEK

112.26 MILES

Total Assessment Units:

4

Federal Category 5 Waters

Federal Categories 4A & 4C Waters

Waters 'Impaired' requiring TMDL Studies

No further TMDL Study required

'Impaired' for one or more parameters

Believed Natural

One TMDL complete one or more remains

Waters 'Impaired' TMDL complete

Waters 'Impaired' Natural

(VA Subcategories)

5A

5C

5D

4A

4C

Impaired Waters:

12.88

Federal Category 3 Waters

non-DEQ Data Method Collection and/or Laboratory not QA/QC'd

Existing Data Insufficient to Assess

Use Not Attained 'Waters of Concern'

Use Attained

(VA Subcategories)

No Data

3A

3B

3C

3D

Insufficient Data:

95.22

Federal Category 2 Waters

Federal Category 1 Waters

Fully Supports Assessed Uses

Fully Supports but are 'Waters of Concern'

'Fully Supports all Uses'

(VA Subcategories)

2A

2B

(VA Subcategories)

1

Support Some Uses:

4.16

Supports All Uses:

* Note: Totals are based on Overall AU Category.

2004 Use Attainment by Assessment Units (AU)

Watershed ID: VAW-L15R

Total Watershed Size: 112.26 M

AU ID: VAW-L15R_ZZZ01A00

95.22 M

AU Overall Category: 3A

LOCATION: Remaining waters in watershed L15R.

State TMDL ID

Use

WOS Attainment

**303(d) Impairment
Initial List Year**

Aquatic Life

Not Assessed

Fish Consumption

Not Assessed

Recreation

Not Assessed

Wildlife

Not Assessed

WQS Class III Sec. 6a None No current data. These waters are not assessed. No VDH fish consumption advisory.

AU ID: VAW-L15R_LNT01A04

1.78 M

AU Overall Category: 2A

LOCATION: Little Chestnut Creek from the confluence of the Northh and South Forks downstream to its mouth on Big Chestnut Creek.

State TMDL ID

Use

WOS Attainment

**303(d) Impairment
Initial List Year**

Aquatic Life

Fully Supporting

Fish Consumption

Not Assessed

Recreation

Not Assessed

Wildlife

Fully Supporting

WQS Class III Sec. 6a None

Assessment basis: DEQ station 4ALNT001.00 (FPM- VAEQ99-201). 4ALNT001.00- A probabilistic site. DO, Temp, pH and NH3-N all Fully Support. No excursions of the PEC SVs are found from a sediment collection. Single observations of FC and Escherichia coli (E. Coli) do exceed their respective criteria (at 400 and 235 cfu/100 ml) but are not assessed. FC at 525 and E. coli at 430 cfu/100 ml. Single TP and chlorophyll a samples do not exceed their respective screening values.

AU ID: VAW-L15R_CTO01A04

2.38 M

AU Overall Category: 2A

LOCATION: Headwaters of Canton Creek downstream to an unnamed tributary at 36°52'35" / 79°55'04".

State TMDL ID

Use

WOS Attainment

**303(d) Impairment
Initial List Year**

Aquatic Life

Fully Supporting

Fish Consumption

Not Assessed

Recreation

Not Assessed

Wildlife

Fully Supporting

WQS Class III Sec. 6a None

Assessment basis: DEQ station 4ACTO001.01 (FPM- VAEQ99-206). 4ACTO001.01- A probabilistic site; DO, Temp, pH and NH3-N all Fully Support. Sediment collection finds no excursions of the PEC SVs. Single FC and Escherichia coli (E. coli) samples did not exceed their respective instantaneous criteria but are not assessed. Non-exceeding single observations of TP and chlorophyll a are also not assessed. No VDH fish consumption advisory.

AU ID: VAW-L15R_CNT01A00

12.88 M

AU Overall Category: 5A

LOCATION: Big Chestnut Creek mainstem from its mouth on the Pigg River upstream to the confluence of Little Chestnut Creek.

State TMDL ID

Use

WOS Attainment

**303(d) Impairment
Initial List Year**

Aquatic Life

Fully Supporting

Fish Consumption

Not Assessed

VAW-L15R-01

Recreation

Not Supporting

303(d) Parameter: Total Fecal Coliform

2004

2004 Use Attainment by Assessment Units (AU)

Wildlife

Fully Supporting

WQS Class III Sec. 6a None

Assessment basis: DEQ stations 4ACNT001.32 (Bio REF station) & 4ACNT001.20 ('99 Sed only). Stream Flow Conditions [9 VAC 25-260-50 Numerical criteria for dissolved oxygen, pH and maximum temperature***]. Total measurements 20 at 4ACNT001.32. Daily Mean Flow; 02056900 Blackwater R. - Rocky Mt. <7Q10 of 12 cfs @ gage on 8/10/02 (10 cfs). One field measurement set excluded from the dataset- each Full Support. 4ACNT001.32- Bio 'NI'; not impaired. RBP II Reference site. Three RBP II Surveys score 100. This station is a Piedmont Ecoregion control site for medium-size (3rd - 4th order) streams in the eastern part of WCRO. This station has been used as a reference for sites on Gills and Maggodee Creeks. The benthic community is very diverse and typically has a high percentage of pollution intolerant taxa. Drought has impacted the region during the last two years having an affect as evidenced by low flows and the streams inability to move fine sediments out of the riffle areas (i.e., lower embedded and sediment deposition scores). The drought and subsequent habitat impacts have potentially had an affect on the benthic macroinvertebrates. 4ACNT001.32- FC exceeds the 400 cfu/100 ml instantaneous criterion in two of 17 samples. The exceedances are 600 and 2300 cfu/100 ml. DO, Temp, pH, TP and NH3-N each Fully Support. AQ sediment collection finds no excursions of the PEC SVs. 4ACNT001.20- WQS 1999 sediment collection for PCB does not exceed the PEC SV of 676 ppb. No VDH fish consumption advisory.

North Fork Little Crestnut Creek - above Franklin County Landfill
 4ALNF002.57
 VAW-L15R

Station ID	Collection Date Time	Temp Celsius	pH (S.U.)	Parm. Code	00900	31616
				Name	Hardness, total (mg/L as CaCO3)	Fecal Coliform Membrane filter M-FC broth
4ALNF002.57	10/17/1990 09:40	14.1	7.68		28.000	200.000

North Fork Little Crestnut Creek - below Franklin County Landfill
 4ALNF002.18
 VAW-L15R

Station ID	Collection Date Time	Temp Celsius	pH (S.U.)	Parm. Code	00900	31616
				Name	Hardness, total (mg/L as CaCO3)	Fecal Coliform Membrane filter M-FC broth
4ALNF002.18	10/17/1990 10:30	13.2	7.42		26.000	100.000

4ACNT001.32 (Rt. 715 Bridge - Chestnut Creek - downstream)
VAW-L15R

Collection Date Time	Temperature (Celsius)	DO (mg/L)	pH (S.U.)	Hardness, Total as CaCO ₃ (mg/L)
10/15/1996 11:30	14.1	7.8	7.9	20
1/13/1997 12:00	1.4	13.5	8.1	18
4/7/1997 12:00	16.2	9.4	8.1	18.5
7/31/1997 12:00	19.7	8	8	18.1
10/15/1997 11:30	15.8	8	7.9	18.6
1/27/1998 12:00	3.2	13	7.5	17.7
3/30/1998 11:30	17.8	9	8	29.2
7/13/1998 13:00	23.6	7.9	8.4	50.7
10/22/1998 13:00	11.8	9.5	8.7	18
1/25/1999 12:00	8	10	7.6	30
4/12/1999 12:30	14.6	8.4	7.7	20
8/10/1999 12:30	23	7.7	7.9	20.9
10/7/1999 11:30	13.6	8.9	8	40
12/20/1999 12:00	7	9.6	7.5	21.2
2/10/2000 11:00	3	10.6	7.1	22.5
4/6/2000 12:00	13.4	9.9	7	18
6/20/2000 11:30	23.1	7.6	7.8	29
7/19/2000 10:05	23.2	8	7.37	20
9/14/2000 11:45	20.8	7.4	7.43	13.9
11/20/2000 12:30	5	12.3		20.1
1/22/2001 12:30	3	12.7	8.5	24
5/7/2001 12:20	17.4	8.88	8.87	13.3
8/11/2003 10:25	20.43	8.57	7.15	
10/30/2003 11:20	10.69	9.87	7.1	
12/16/2003 10:30	7.5	12.3	7.6	
2/4/2004 14:45	4.76	11.4	6.46	
4/20/2004 10:00	17.48	9.33	6.82	
6/16/2004 10:45	21.5	8.97	6.92	
8/31/2004 10:15	21.3	8.15	6.99	
10/19/2004 13:00	12.58	9.6	6.59	
10/19/2004 13:05	12.58	9.6	6.59	
10/25/2004 10:45	13.7	10.2	6.53	
12/27/2004 11:45	1.46	12.37	7.17	
2/16/2005 11:00	8.72	11.1	6.8	
4/27/2005	13.8	10.03	7.65	
6/28/2005 11:10	21.2	7.8	7.4	

90th Percentile temperature

22.3 °C

90th Percentile pH

8.3 S.U.

10th Percentile pH

6.7 S.U.

Mean Hardness

22.8 mg/L*

(*25 mg/L used in AWLA spreadsheet because calculation of
metals wasteload allocations not based upon hardness below 25 mg/L.)

France,Becky

From: Ewing, Amy (DGIF)
Sent: Friday, February 01, 2008 11:17 AM
To: France,Becky
Cc: Pinder, Mike (DGIF)
Subject: RE: Endangered Species Evaluation for Franklin County Sanitary Landfill

Becky,

We have reviewed this outfall location on North Fork Little Chestnut Creek in Franklin County. Although we currently do not document any listed species within 2 miles of this location, we agree with DCR-DNH that this site should be further evaluated for the possible presence of state Threatened orangefin madtom and federal Endangered Roanoke logperch as they are both known from this drainage. We recommend that an habitat assessment be performed by a qualified biologist from the point of the discharge through 500 meters downstream. The habitat assessment report should include good descriptions of the stream size, average depth, canopy cover, substrates, and flow. In addition, we recommend that good quality photographs are taken of the stream and that they are included in the assessment report. The report should be made available to Amy Ewing in VDGI's Richmond office and Mike Pinder, VDGI Region III Wildlife Diversity Biologist, in the Blacksburg office. Upon review of this assessment, we will determine whether further surveys, time of year restrictions, changes in the type of effluent treatment, changes to effluent limits, or other conservation actions are necessary to protect listed species. Thank you. Amy

Amy M. Ewing
Environmental Services Biologist
Virginia Dept. of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230
804-367-2211
amy.ewing@dgif.virginia.gov

From: France, Becky (DEQ)
Sent: Friday, January 04, 2008 4:12 PM
To: Ewing, Amy
Subject: Endangered Species Evaluation for Franklin County Sanitary Landfill

The permit application is for a new issuance that is associated with a ground water treatment operation (air stripping system) to remove volatile contaminants. The coordinates for the one outfall are 36o55'55" and 79o51'31". An existing storm water discharge from the landfill to this outfall permitted under a storm water general permit will be included in the discharge to this outfall. Outfall 001 will be to the North Fork of Little Chestnut Creek at the confluence of an unnamed tributary. I have attached a PDF file with the discharge location marked. If you have any problems with the attachments or need more information, please give me a call at (540) 562-6793.

2/4/2008



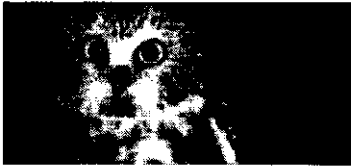
Species List Report

List of species known or likely to occur within a **2 mile radius of 365555 795131** in **067 Franklin, Va.** This report is compiled on 7/27/2007,8:23:19 AM

1-78 Species Records

Bova Code	Status*	Common Name	Scientific Name	Confirmed	Database(s)
010214	FESE	Logperch, Roanoke	Percina rex	No	BOVA
010127	FSST	Madtom, orangefin	Noturus gilberti	No	BOVA
060173	FSST	Pigtoe, Atlantic	Fusconaia masoni	No	BOVA
010109	FS	Sucker, Roanoke hog	Hypentelium roanokense	Yes	Collections
010110	FS	Jumprock, bigeye	Scartomyzon (= Moxostoma) ariommus (= ariommum)	Yes	Collections
010174	FSSS	Bass, Roanoke	Ambloplites cavifrons	Yes	Collections
010197	FS	Darter, wounded	Etheostoma vulneratum	Yes	Collections
010200	FS	Darter, riverweed	Etheostoma podostemone	Yes	Collections
010363	FS	Darter, Appalachia	Percina gymnocephala	Yes	Collections
010038		Alewife	Alosa pseudoharengus	Yes	Collections
010040		Shad, American	Alosa sapidissima	Yes	Collections
010041		Shad, gizzard	Dorosoma cepedianum	Yes	Collections
010045		Herring, blueback	Alosa aestivalis	Yes	Collections
010050		Trout, rainbow	Oncorhynchus mykiss	Yes	Collections
010051		Trout, brown	Salmo trutta	Yes	Collections
010052		Trout, brook	Salvelinus fontinalis	Yes	Collections
010058		Stoneroller, central	Campostoma anomalum	Yes	Collections
010060		Dace, mountain redbelly	Phoxinus oreas	Yes	Collections, Collections
010061		Darter, Roanoke	Percina roanoka	Yes	Collections,

*FE=Federal Endangered; FT=Federal Threatened; FC=Federal Candidate; FS=Federal Species of Concern (not a legal status; list maintained by USFWS Virginia Field Office); SE=State Endangered; ST=State Threatened; SS=State Special Concern (not a legal status).



Virginia Fish and Wildlife Information Service

[Step 1: Point of Interest](#) ► [Step 2: Customize Report](#) ► [Step 3: Species List](#) ► [Report Card](#)

Confirmation Records

Confirmation records for **Sucker, Roanoke hog(010109)** in **06**

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[By Map](#)

[By Coordinates](#)

[By Place Name](#)

[Species Information](#)

[Help](#)

Scientific Collections Records.



[View all Maps](#)

Collection ID	Description	Vi
10629	Collection Date Wednesday, April 12, 1972; Collector Hambrick, Hocutt, and Masnik	Ye
30502	Collection Date Tuesday, January 01, 1946; Collector ECR-RANEY	Ye
33334	Collection Date Saturday, January 01, 1972; Collector VPI-VA. TECH	Ye

Confirm Sucker,
Roanoke hog 010109 in
Collections

Virginia Fish and Wildlife Information Service



36,55,55.0 -79,51,31.0
is the Search Point

Help

Refresh Browser Page

Map
Click

Pan

Map
Scale

In

Zoom

Out

Screen
Size

Small

Size

Show Position Rings

☐ Yes ☒ No
1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No
2 miles

Search Point is
map center

Use this option to apply or remove Search
Area on the map. Search Area lightly
shades the landscape being reported.

Base Map Choices

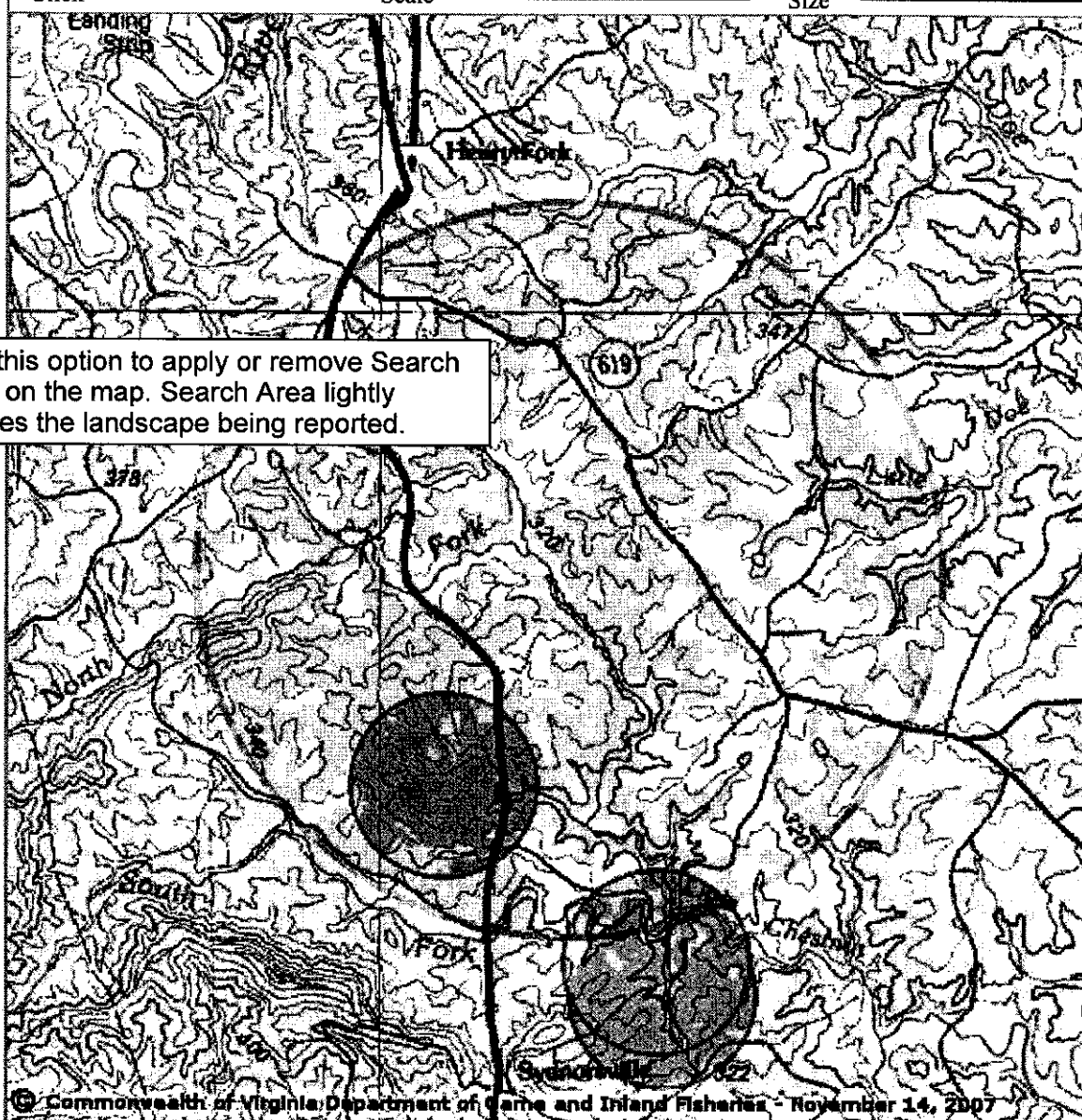
Topography

Map Overlay Choices

Current List: Search,
Collections

Map Overlay Legend

- 2 mile radius
Search Area
- Data Collection Site
- Selected Site



N
↑

1 0 1 2 3 4 Kilometers
1 0 1 2 3 4 Miles

Point of Search 36,55,55.0 -79,51,31.0

L. Preston Bryant, Jr.
Secretary of Natural Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951 FAX (804) 371-2674

November 27, 2007

Becky France
DEQ-West Central Regional Office
3019 Peters Creek Road
Roanoke, VA 24019

Re: Franklin County Sanitary Landfill

Dear Ms. France:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Big Chestnut Creek – Pigg River Stream Conservation Unit (SCU) is downstream of the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Big Chestnut Creek – Pigg River SCU has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern associated with this SCU are:

<i>Lampsilis cariosa</i>	Yellow lampmussel	G3G4/S2/NL/SC
<i>Noturus gilberti</i>	Orangefin madtom	G2/S2/SOC/LT
<i>Percina rex</i>	Roanoke logperch	G1G2/S1S2/LE/LE

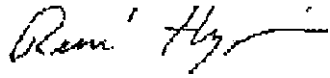
The Yellow lampmussel averages about 70 mm in length but can reach a length of 130 mm (Johnson, 1970) and is found in larger streams and rivers where good currents exist over a sand and gravel substrate and in small creeks and ponds. This species is known to occur in the Potomac, York, and Chowan river basins (TNC, 1996). Please note that this species is currently classified as a special concern species by the Virginia Department of Game and Inland Fisheries (VDGIF); however, this designation has no official legal status.

*State Parks • Soil and Water Conservation • Natural Heritage • Outdoor Recreation Planning
Chesapeake Bay Local Assistance • Dam Safety and Floodplain Management • Land Conservation*

waters, that may contain information not documented in this letter. Their database may be accessed from www.dgif.virginia.gov/wildlife/info map/index.html, or contact Shirl Dressler at (804) 367-6913.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "René Hypes".

S. René Hypes
Project Review Coordinator

Cc: Amy Ewing, VDGIF
Kim Smith, USFWS

Literature Cited

Burkhead, N.M. and R.E. Jenkins. 1991. Roanoke logperch. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. p. 395-397.

Jenkins, R. E., and N. M. Burkhead. 1993. Freshwater fishes of Virginia. American Fisheries Society, Bethesda, Maryland.

Johnson, R.I. 1970. The systematics and zoogeography of the Unionidae (Mollusca: Bivalva) of the southern Atlantic slope region. Bulletin Museum of Comparative Zoology vol 140(6): 362-365.

The Nature Conservancy. 1996. Biological and Conservation Data System. Arlington, Virginia, USA.

The Nature Conservancy and The Network of Natural Heritage Programs and Conservation Data Centers. 1991. Natural Heritage Conservation Databases. Accessed through the Biosource web site project. The Nature Conservancy, Arlington, VA. (7/14/99).

Attachment F

Ground Water Monitoring Results

Franklin County Sanitary Landfill
VA0092142

	Ammonia as N mg/L	Alpha Terpineol µg/L	Benzoic Acid µg/L	BOD ₅ mg/L	p-Cresol ug/L	Phenol ug/L	pH S.U.	TSS mg/L	Zinc, Total µg/L	Iron, Total mg/L
Storm Water Limits (Average)	4.9	16	71	37	14	15	6.0- 9.0	27	110	1.0**
4/11/2007	1.8	<10	<10	<2.0	<10	<10	7.39	4.6	20	
6/19/2006	0.784	<9.43	<47.2	3.42	<9.43	<9.43	7.90	5.20	<50	
6/29/2005*	0.550	--	<10	6.20	<10	<10	6.8	19,800	820	
11/24/2003	--	--	--	--	--	--	--	--	--	14
9/8/2003	--	--	--	--	--	--	--	--	--	4.1
9/10/2001	--	--	--	--	--	--	--	36	--	1.6

*Intense storm produced 2.5 inches over approximately 1.2 hrs resulting in erosion.

** Benchmark value 1.0 mg/L (Benchmark value is a target value not a limit.)

TABLE 2

- Any detection above MDL
- Detections above GPS
- Blank Qualified Pre Test
- Blank Qualified Post Test
- Found in Blanks form both Tests

TABLE 1
Summary of Detected 5.1 Constituents - November 2005 Compliance Sampling Event
FRANKLIN COUNTY LANDFILL

Parameter	Method	MDL	MDL	Units	MW-2	MW-3	MW-4	MW-5	MW-6R	MW-11	MW-12	MW-13	MW-14	SW-1	SW-2	SW-3	GPS
Lead	6010	2	10	ug/L	2.9	J	2.8	J	ND	2.6	J	ND	ND	ND	ND	ND	15
Arsenic	6010	2	10	ug/L	ND	ND	2.6	B	2.2	B	2.1	B	3.2	B	4.1	B	10
Barium	6010	0.2	10	ug/L	72	280	74	210	41	130	27	42	51	18	18	17	2000
Selenium	6010	2	10	ug/L	ND	ND	4.8	J	11	ND	ND	ND	ND	ND	ND	ND	50
Zinc	7950	3	30	ug/L	92	12	7	44	J	6	J	9	J	ND	ND	ND	4695
Cobalt	6010	2	10	ug/L	43	120	37	62	ND	ND	ND	ND	26	ND	ND	ND	313
Copper	6010	0.6	10	ug/L	ND	ND	0.6	B	1.2	B	1	B	1.6	B	1.3	B	626
Vanadium	6010	1	10	ug/L	ND	ND	ND	ND	ND	2.3	J	ND	ND	ND	ND	ND	110
Cadmium	6010	0.5	1	ug/L	ND	ND	ND	ND	ND	0.9	J	ND	ND	ND	ND	ND	5
Nickel	6010	2	50	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	2.9	J	ND	ND	313
Sulfide, Total	376.1	1000	1000	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	740	B	1300	B	7000
Ethylbenzene	8260	0.2	1	ug/L	2	5	2	5	ND	0.9	J	ND	J	ND	ND	ND	700
Benzene	8260	0.3	1	ug/L	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Toluene	8260	0.2	1	ug/L	32	6	78	6	6	10	4	ND	ND	ND	ND	ND	1000
1,1,1-Trichloroethane	8260	0.3	1	ug/L	16	26	2	9	ND	ND	ND	ND	ND	ND	ND	ND	2
Chlorobenzene	8260	0.3	1	ug/L	6	35	6	25	ND	ND	ND	ND	ND	ND	ND	ND	75
1,4-Dichlorobenzene	8260	0.2	1	ug/L	ND	ND	ND	ND	0.8	J	5	J	3	ND	ND	ND	125
Dichlorodifluoromethane	8260	0.2	1	ug/L	ND	5	1	5	2	18	ND	1	ND	ND	ND	ND	296
1,1-Dichloroethane	8260	0.5	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.64
Chloroethane	8260	0.4	1	ug/L	180	ND	2	7	ND	ND	ND	ND	ND	ND	ND	ND	70
1,1,2-Dichloroethane	8260	0.2	1	ug/L	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
t-1,2-Dichloroethane	8260	0.2	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Methylene Chloride	8260	0.4	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,1-Trichloroethane	8260	0.4	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000
Xylenes - total	8260	0.2	2	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-Dichloroethane	8260	0.5	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000
Chloroform	8260	0.3	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
4-Chloro-3-methylphenol	8270	3	10	ug/L	7	J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	80
2,4,5-TP	8151	0.4	0.6	ug/L	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200
Total VOC's					252.8	78	21	72	2.8	78.9	1	16.8	8		1		

Any detection above MDL

Detections above GPS

Blank Qualified

Table 1
Franklin Co.
Summary of VPDES Analytical Parameters

Sample Pt.	MW-2	MW-12	MW-13	MW-14	OW-1S	EW-1
Date	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/12/2006	11/12/2006
Temperature (°C)	15.1	14.4	14.1	14.0	14.9	19.5
pH (SU)	6.27	5.54	5.78	6.26	5.58	4.46
Conductivity (µS)	517.0	41.4	140.2	219.0	824.0	572.0
Turbidity (ntu)	18.9	11.0	5.7	5.8	23.8	21.9
Date	11/9/2006	11/9/2006	11/9/2006	11/9/2006	Avg.	
Temperature (°C)	14.1	13.9	13.8	13.5	14.7	
pH	6.26	5.34	5.69	6.52	5.8	
Conductivity (µS)	638.0	35.0	133.2	225.0	334.5	
Turbidity (ntu)	11.5	171.0	7.0	13.4	29.0	
Date			11/29/2006	11/29/2006	7/5/2006	
Dissolved Cadmium (mg/l)			<0.00012	<0.00012		
Dissolved Chromium III (mg/l)			<0.002 *	<0.002 *		
Dissolved Chromium VI (mg/l)			0.02 (<0.005**)	<0.003		
Dissolved Selenium (mg/l)			0.0055 "	< 0.002		
Dissolved Silver (mg/l)			< 0.002	< 0.002		
Dissolved Thallium (mg/l)			< 0.004	< 0.004		
Dissolved Zinc (mg/l)			0.0025 J	0.042 J		
Oil and Grease (mg/l)			< 3	< 3		
BOD (mg/l)					5	
COD (mg/l)			< 10	< 10		
TOC (mg/l)					6.31	
TSS (mg/l)					5	
Ammonia (mg/l)			0.04 J	0.03 J	< 0.1	
Phosphorus (mg/l)			0.061	0.02 J		
TKN (mg/l)			<0.04	<0.04		
NOx (mg/l)			0.68	0.12		

Table 1 (cont.)
 Franklin Co.
 Summary of VPDES Analytical Parameters

Sample Pt.	MW-2	MW-12	MW-13	MW-14	OW-1S	EW-1
Date			12/21/2006	12/21/2006		
Benzoic acid (mg/l)			0.02	0.02		
Alpha-terpineol (mg/l)			ND	ND		
Date	5/10/2007		5/10/2007			
BOD (mg/l)	10.8		< 2			
TSS (mg/l)	28		10			

* Cr-III based on total Cr results.

** Results after resample on 12/21/06.

J = estimated concentration below quantitation limit.

ND = screened for but not detected.

Franklin County Sanitary Landfill
VA0092142

	Ammonia as N mg/L	Alpha Terpineol µg/L	Benzoic Acid µg/L	BOD ₅ mg/L	p-Cresol ug/L	Phenol ug/L	pH S.U.	TSS mg/L	Zinc, Total µg/L	Iron, Total mg/L
Storm Water Limits (Average)	4.9	16	71	37	14	15	6.0- 9.0	27	110	1.0**
4/11/2007	1.8	<10	<10	<2.0	<10	<10	7.39	4.6	20	
6/19/2006	0.784	<9.43	<47.2	3.42	<9.43	<9.43	7.90	5.20	<50	
6/29/2005*	0.550	--	<10	6.20	<10	<10	6.8	19,800	820	
11/24/2003	--	--	--	--	--	--	--	--	--	14
9/8/2003	--	--	--	--	--	--	--	--	--	4.1
9/10/2001	--	--	--	--	--	--	--	36	--	1.6

*Intense storm produced 2.5 inches over approximately 1.2 hrs resulting in erosion.

** Benchmark value 1.0 mg/L (Benchmark value is a target value not a limit.)

Ground Water Monitoring Data (µg/L)

Monitoring Well ID	Sb	As	Cd		Cr III	Cr VI	Cu	Pb	Hg	Ni	Se		Ag	Th	Zn	
			total	dissolved							total	dissolved			total	dissolved
MW-2	11/8/05	11/8/05	11/18/05	11/29/06	11/29/06	11/29/06	11/29/06	11/18/06	11/8/05	11/8/05	11/8/05	11/29/06	11/29/06	11/29/06	11/18/05	11/29/06
MW-12	<1	<2	<0.5 ¹				<0.6	2.9J	<0.07	<2	<2	<2			92 ²	
MW-13		2.1B	<0.5 ¹				1B	<2	-	<2	<2				8J	
MW-14	--	3.2B	<0.5 ¹	<0.12	<2	20	1.6B	<2	-	<2	<2	5.5	<2	<4	9J	2.6J
MW-17S	--	<2	<0.5 ¹	<0.12	<2	<3	<0.6	<2	-	2.9J	<2	<2	<2	<4	<3	42J
MW-17D	<1							<2	<0.07	<2 ³	<2				13	
OW-1S	<1							2.4B ⁴	<0.07	<2 ⁵	<2				<3	
OW-1D	<1							3.3B ⁶	<0.07	<2 ⁷	<2				24	
Surface Water								<2 ⁸	<0.07	<2 ⁹	7				<3 ¹⁰	
Acute Wasteload Allocation		340	0.82		180	16	3.6	20	1.40	57	20	20	0.32		36	
Surface Water Chronic Wasteload Allocation																
Human Health Wasteload Allocation		170	0.44		27	13	3.1	2.7	0.88	7.2	5.7	5.7	--		42	
														0.63		

¹ Quantification level higher than chronic wasteload allocation.

² The post aeration concentration decreased to 38 µg/L.

³ The post aeration concentration increased to 99 µg/L.

⁴ The post aeration concentration decreased to <2 µg/L.

⁵ The post aeration concentration decreased to <2 µg/L.

⁶ The post aeration concentration increased to 3.4J µg/L.

⁷ The post aeration concentration increased to 2J µg/L.

⁸ The post aeration concentration increased to 28J µg/L.

⁹ The post aeration concentration increased to 20J µg/L.

¹⁰ The post aeration concentration increased to 12J µg/L.

B - report defect considered to be blank contamination

J- estimated concentration

Franklin County Sanitary Landfill
VA0092142

Ground Water Data

Date	pH (S.U.)	Well No.
11/8/2005	5.31	MW-17S
11/12/2005	4.53	OW-1D
11/18/2005	6.22	MW-17D
11/18/2005	6.63	OW-1D
11/18/2005	6.17	EW-1
11/9/2006	6.26	MW-2
11/9/2006	5.34	MW-12
11/9/2006	5.69	MW-13
11/9/2006	6.52	MW-14

90th Percentile pH	6.44 S.U.
10th Percentile pH	5.45 S.U.

Attachment G

Wasteload Calculations

- **Mixing Zone Output (MIXER 2.1)**
- **Antidegradation Wasteload Allocation Spreadsheet**

Stream Width Calculations During Low Flow Conditions

Franklin County Landfill

North Fork Little Chestnut Creek Rectangular
Segment 1

Velocity Calculations at 7Q10

Velocity and area calculations to use in table.

		7Q10	
		Effluent	Stream
		Flow	Flow
Manning n	Slope	MGD	MGD
0.07	0.005	0.0864	0.31

Stream characteristics at 7Q10 conditions calculated in table.

Depth (ft)	Width (ft)	Velocity (ft/s)
0.234	4.89	0.536

Manning Equation

$$V(\text{fps}) = (1.486/n) * R_h^{2/3} * S^{0.5}$$

Rectangular

$$R_h = d * w / (2d + w)$$

Rectangular Surface Area = $d * w$

Continuity Equation

$$V = Q/A$$

Roughness Coefficient		
Factors	n	+
sand bottom	0.05	
silt bottom	0.07	
gravel bottom	0.09	
small rock	0.11	
large rock	0.15	
boulders	0.18	
modest meander		n+0.02
severe meander	0.00	n+0.04
light plants		n+0.03
heavy plants		n+0.06

Site Visit Stream Characteristics:

Length of Segment (feet)	5280
Length of Segment (mi)	1.000
Observed Width	122.5
Observed Depth	0.2

Depth (ft)	Width (ft)	R _h (ft)	Manning V (ft/s)	Continuity V (ft/s)	X-sec area (ft ²)	Flow (cfs)*
0.354	5.01	0.310	0.688	0.346	1.7735	0.6134
0.344	5	0.302	0.676	0.357	1.7200	0.6134
0.334	4.99	0.295	0.665	0.368	1.6667	0.6134
0.324	4.98	0.287	0.653	0.380	1.6135	0.6134
0.314	4.97	0.279	0.641	0.393	1.5606	0.6134
0.304	4.96	0.271	0.628	0.407	1.5078	0.6134
0.294	4.95	0.263	0.616	0.422	1.4553	0.6134
0.284	4.94	0.255	0.603	0.437	1.4030	0.6134
0.274	4.93	0.247	0.590	0.454	1.3508	0.6134
0.264	4.92	0.238	0.577	0.472	1.2989	0.6134
0.254	4.91	0.230	0.564	0.492	1.2471	0.6134
0.244	4.9	0.222	0.550	0.513	1.1956	0.6134
0.234	4.89	0.214	0.536	0.536	1.1443	0.6134
0.224	4.88	0.205	0.522	0.561	1.0931	0.6134
0.214	4.87	0.197	0.508	0.589	1.0422	0.6134
0.204	4.86	0.188	0.493	0.619	0.9914	0.6134
0.194	4.85	0.180	0.478	0.652	0.9409	0.6134
0.184	4.84	0.171	0.462	0.689	0.8906	0.6134
0.174	4.83	0.162	0.447	0.730	0.8404	0.6134
0.164	4.82	0.154	0.430	0.776	0.7905	0.6134

*Includes discharge

Bold font indicates resolved velocities.

Information for Model

Elevation Beginning (feet)	1359
Elevation Ending (feet)	1345.8
Drainage Area at Beginning (sq mi.)	412.81
Drainage Area at End (sq mi.)	412.82

* back calculated for model so that slope = 0.0025

Mixing Zone Predictions for

Franklin County Sanitary Landfill

Effluent Flow = 0.0864 MGD
Stream 7Q10 = 0.31 MGD
Stream 30Q10 = 0.49 MGD
Stream 1Q10 = 0.26 MGD
Stream slope = 0.005 ft/ft
Stream width = 4.89 ft
Bottom scale = 3
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = .3098 ft
Length = 56.01 ft
Velocity = .405 ft/sec
Residence Time = .0016 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = .3924 ft
Length = 45.09 ft
Velocity = .4649 ft/sec
Residence Time = .0011 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .2847 ft
Length = 60.45 ft
Velocity = .3851 ft/sec
Residence Time = .0436 hours

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Franklin County Sanitary Landfill
Receiving Stream: North Fork Little Chestnut Creek

Permit No.: VA0092142

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information			Stream Flows			Mixing Information			Effluent Information								
Mean Hardness (as CaCO3) =	25 mg/L		1Q10 (Annual) =	0.26 MGD		Annual - 1Q10 Mix =	100 %		Mean Hardness (as CaCO3) =	25 mg/L							
90% Temperature (Annual) =	22.3 deg C		7Q10 (Annual) =	0.31 MGD		- 7Q10 Mix =	100 %		90% Temp (Annual) =	22.3 deg C							
90% Temperature (Wet season) =	22.3 deg C		3Q10 (Annual) =	0.49 MGD		- 3Q10 Mix =	100 %		90% Temp (Wet season) =	22.3 deg C							
90% Maximum pH =	8.3 SU		1Q10 (Wet season) =	1.19 MGD		Wet Season - 1Q10 Mix =	100 %		90% Maximum pH =	6.44 SU							
10% Maximum pH =	6.7 SU		3Q10 (Wet season)	1.89 MGD		- 3Q10 Mix =	100 %		10% Maximum pH =	5.45 SU							
Tier Designation (1 or 2) =	2		3Q05 =	0.69 MGD					Discharge Flow =	0.0864 MGD							
Public Water Supply (PWS) Y/N? =	N		Harmonic Mean =	2.51 MGD													
Trout Present Y/N? =	N		Annual Average =	n/a MGD													
Early Life Stages Present Y/N? =	Y																
Parameter (ug/L unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	
Acenaphthene	0	-	-	na	2.7E+03	-	-	na	2.4E+04	-	-	na	2.7E+02	-	-	na	2.4E+03
Acrolein	0	-	-	na	7.8E+02	-	-	na	7.0E+03	-	-	na	7.8E+01	-	-	na	7.0E+02
Acrylonitrile ^c	0	-	-	na	6.6E+00	-	-	na	2.0E+02	-	-	na	6.6E-01	-	-	na	2.0E+01
Aldrin ^c	0	3.0E+00	-	na	1.4E-03	1.2E+01	-	na	4.2E-02	7.5E-01	-	na	1.4E-04	3.0E+00	-	na	4.2E-03
Ammonia-N (mg/l) (Yearly)	0	3.53E+01	3.21E+00	na	-	1.4E+02	2.1E+01	na	-	8.82E+00	8.02E-01	na	-	3.5E+01	5.3E+00	na	-
Ammonia-N (mg/l) (High Flow)	0	1.89E+01	2.20E+00	na	-	2.8E+02	5.0E+01	na	-	4.72E+00	5.51E-01	na	-	7.0E+01	1.3E+01	na	-
Anthracene	0	-	-	na	1.1E+05	-	-	na	9.9E+05	-	-	na	1.1E+04	-	-	na	9.9E+04
Antimony	0	-	-	na	4.3E+03	-	-	na	3.9E+04	-	-	na	4.3E+02	-	-	na	3.9E+03
Arsenic	0	3.4E+02	1.5E+02	na	-	1.4E+03	6.9E+02	na	-	8.5E+01	3.8E+01	na	-	3.4E+02	1.7E+02	na	-
Barium	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na	-
Benzene ^c	0	-	-	na	7.1E+02	-	-	na	2.1E+04	-	-	na	7.1E+01	-	-	na	2.1E+03
Benzo(a)anthracene ^c	0	-	-	na	5.4E-03	-	-	na	1.6E-01	-	-	na	5.4E-04	-	-	na	1.6E-02
Benzo (a) anthracene ^c	0	-	-	na	4.9E-01	-	-	na	1.5E+01	-	-	na	4.9E-02	-	-	na	1.5E+00
Benzo (b) fluoranthene ^c	0	-	-	na	4.9E-01	-	-	na	1.5E+01	-	-	na	4.9E-02	-	-	na	1.5E+00
Benzo (k) fluoranthene ^c	0	-	-	na	4.9E-01	-	-	na	1.5E+01	-	-	na	4.9E-02	-	-	na	1.5E+00
Benzo (a) pyrene ^c	0	-	-	na	4.9E-01	-	-	na	1.5E+01	-	-	na	4.9E-02	-	-	na	1.5E+00
Bis(2-Chloroethyl) Ether	0	-	-	na	1.4E+01	-	-	na	1.3E+02	-	-	na	1.4E+00	-	-	na	1.3E+01
Bis(2-Chloroisopropyl) Ether	0	-	-	na	1.7E+05	-	-	na	1.5E+06	-	-	na	1.7E+04	-	-	na	1.5E+05
Bromodorm ^c	0	-	-	na	3.6E+03	-	-	na	1.1E+05	-	-	na	3.6E+02	-	-	na	1.1E+04
Butylbenzophthalate	0	-	-	na	5.2E+03	-	-	na	4.7E+04	-	-	na	5.2E+02	-	-	na	4.7E+03
Cadmium	0	8.2E-01	3.8E-01	na	-	3.3E+00	1.8E+00	na	-	2.1E-01	9.5E-02	na	-	8.2E-01	4.4E-01	na	-
Carbon Tetrachloride ^c	0	-	-	na	4.4E+01	-	-	na	1.3E+03	-	-	na	4.4E+00	-	-	na	1.3E+02
Chlordane ^c	0	2.4E+00	4.3E-03	na	2.2E-02	9.6E+00	2.0E-02	na	6.6E-01	6.0E-01	1.1E-03	na	2.2E-03	2.4E+00	4.9E-03	na	8.8E-02
Chloride	0	8.6E+05	2.3E+05	na	-	3.4E+06	1.1E+06	na	-	2.2E+05	5.8E+04	na	-	8.6E+05	2.6E+05	na	-
TRC	0	1.9E+01	1.1E+01	na	-	7.6E+01	5.0E+01	na	-	4.8E+00	2.8E+00	na	-	1.9E+01	1.3E+01	na	-
Chlorobenzene	0	-	-	na	2.1E+04	-	-	na	1.9E+05	-	-	na	2.1E+03	-	-	na	1.9E+04

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Chlorobromomethane ^c	0	-	-	na	3.4E+02	-	-	na	1.0E+04	-	-	na	3.4E+01	-	-	na
Chloroform ^c	0	-	-	na	2.9E+04	-	-	na	8.7E+05	-	-	na	2.9E+03	-	-	na
2-Chloronaphthalene	0	-	-	na	4.3E+03	-	-	na	3.9E+04	-	-	na	4.3E+02	-	-	na
2-Chlorophenol	0	-	-	na	4.0E+02	-	-	na	3.6E+03	-	-	na	4.0E+01	-	-	na
Chlorpyrifos	0	8.3E-02	4.1E-02	na	-	3.3E-01	1.9E-01	na	-	2.1E-02	1.0E-02	na	-	8.3E-02	4.7E-02	na
Chromium III	0	1.8E+02	2.4E+01	na	-	7.3E+02	1.1E+02	na	-	4.6E+01	6.0E+00	na	-	1.8E+02	2.7E+01	na
Chromium VI	0	1.6E+01	1.1E+01	na	-	6.4E+01	5.0E+01	na	-	4.0E+00	2.8E+00	na	-	1.6E+01	1.3E+01	na
Chromium, Total	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Chrysene ^c	0	-	-	na	4.9E-01	-	-	na	1.5E+01	-	-	na	4.9E-02	-	-	na
Copper	0	3.6E+00	2.7E+00	na	-	1.5E+01	1.3E+01	na	-	9.1E-01	6.9E-01	na	-	3.6E+00	3.1E+00	na
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	8.8E+01	2.4E+01	na	1.9E+06	5.5E+00	1.3E+00	na	2.2E+04	2.2E+01	6.0E+00	na
DDD ^c	0	-	-	na	8.4E-03	-	-	na	2.5E-01	-	-	na	8.4E-04	-	-	na
DDE ^c	0	-	-	na	5.9E-03	-	-	na	1.8E-01	-	-	na	5.9E-04	-	-	na
DDT ^c	0	1.1E+00	1.0E-03	na	5.9E-03	4.4E+00	4.6E-03	na	1.8E-01	2.8E-01	2.5E-04	na	5.9E-04	1.1E+00	1.1E-03	na
Demeton	0	-	1.0E-01	na	-	-	4.8E-01	na	-	-	2.5E-02	na	-	-	1.1E-01	na
Dibenz(a,h)anthracene ^c	0	-	-	na	1.2E+04	-	-	na	1.1E+05	-	-	na	1.2E+03	-	-	na
Dibutyl phthalate	0	-	-	na	1.6E+04	-	-	na	4.8E+05	-	-	na	1.6E+03	-	-	na
Dichloromethane	0	-	-	na	1.7E+04	-	-	na	1.5E+05	-	-	na	1.7E+03	-	-	na
(Methylene Chloride) ^c	0	-	-	na	2.6E+03	-	-	na	2.3E+04	-	-	na	2.6E+02	-	-	na
1,2-Dichlorobenzene	0	-	-	na	2.6E+03	-	-	na	2.3E+04	-	-	na	2.6E+02	-	-	na
1,3-Dichlorobenzene	0	-	-	na	2.6E+03	-	-	na	2.3E+04	-	-	na	2.6E+02	-	-	na
1,4-Dichlorobenzene	0	-	-	na	7.7E-01	-	-	na	2.3E+01	-	-	na	7.7E-02	-	-	na
3,3-Dichlorobenzidine ^c	0	-	-	na	4.6E+02	-	-	na	1.4E+04	-	-	na	4.6E+01	-	-	na
Dichlorobromomethane ^c	0	-	-	na	9.9E+02	-	-	na	3.0E+04	-	-	na	9.9E+01	-	-	na
1,2-Dichloroethane ^c	0	-	-	na	1.7E+04	-	-	na	1.5E+05	-	-	na	1.7E+03	-	-	na
1,1-Dichloroethylen	0	-	-	na	1.4E+05	-	-	na	1.3E+06	-	-	na	1.4E+04	-	-	na
1,2-trans-dichloroethylene	0	-	-	na	7.9E+02	-	-	na	7.1E+03	-	-	na	7.9E+01	-	-	na
2,4-Dichlorophenol	0	-	-	na	3.9E+02	-	-	na	1.2E+04	-	-	na	3.9E+01	-	-	na
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	-	-	na	1.7E+03	-	-	na	1.5E+04	-	-	na	1.7E+02	-	-	na
1,2-Dichloropropane ^c	0	-	-	na	1.4E+03	-	-	na	4.2E-02	6.0E-02	1.4E-02	na	1.4E-04	2.4E-01	6.4E-02	na
1,3-Dichloropropene	0	2.4E-01	5.6E-02	na	1.2E+05	9.6E-01	2.5E-01	na	1.1E+06	-	-	na	1.2E+04	-	-	na
Dieldrin ^c	0	-	-	na	5.9E+01	-	-	na	1.8E+03	-	-	na	5.9E+00	-	-	na
Diethyl Phthalate	0	-	-	na	2.3E+03	-	-	na	2.1E+04	-	-	na	2.3E+02	-	-	na
Di-2-Ethylhexyl Phthalate ^c	0	-	-	na	2.9E+06	-	-	na	2.6E+07	-	-	na	2.9E+05	-	-	na
2,4-Dimethylphenol	0	-	-	na	1.2E+04	-	-	na	1.1E+05	-	-	na	1.2E+03	-	-	na
Dimethyl Phthalate	0	-	-	na	1.4E+04	-	-	na	1.3E+05	-	-	na	1.4E+03	-	-	na
Di-n-Butyl Phthalate	0	-	-	na	7.65E+02	-	-	na	6.9E+03	-	-	na	7.7E+01	-	-	na
2,4-Dinitrophenol	0	-	-	na	9.1E+01	-	-	na	2.7E+03	-	-	na	9.1E+00	-	-	na
2-Methyl-4,6-Dinitrophenol	0	-	-	na	1.2E+06	-	-	na	1.6E+02	-	-	na	1.2E+07	-	-	na
2,4-Dinitrotoluene ^c	0	-	-	na	5.4E+00	-	-	na	5.4E+00	-	-	na	5.4E+01	-	-	na
Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppt)	0	-	-	na	8.8E-01	2.6E-01	2.6E-01	na	2.2E+03	5.5E-02	1.4E-02	na	2.4E+01	2.2E-01	6.4E-02	na
1,2-Diphenylhydrazine ^c	0	2.2E-01	5.6E-02	na	2.4E+02	8.8E-01	2.6E-01	na	2.2E+03	5.5E-02	1.4E-02	na	2.4E+01	2.2E-01	6.4E-02	na
Alpha-Endosulfan	0	-	-	na	2.4E+02	-	-	na	2.2E+03	-	-	na	2.4E+01	-	-	na
Beta-Endosulfan	0	-	-	na	2.4E+02	-	-	na	2.2E+03	-	-	na	2.4E+01	-	-	na
Endosulfan Sulfate	0	8.6E-02	3.6E-02	na	8.1E-01	3.4E-01	1.7E-01	na	7.3E+00	2.2E-02	9.0E-03	na	8.1E-02	8.6E-02	4.1E-02	na
Endrin	0	-	-	na	8.1E-01	-	-	na	7.3E+00	-	-	na	8.1E-02	-	-	na
Endrin Aldehyde	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Ethylbenzene	0	-	-	na	2.6E+04	-	-	na	2.6E+04	-	-	na	2.6E+04	-	-	na
Fluoranthene	0	-	-	na	3.7E+02	-	-	na	3.7E+01	-	-	na	3.7E+01	-	-	na
Fluorene	0	-	-	na	1.4E+04	-	-	na	1.4E+03	-	-	na	1.3E+04	-	-	na
Foaming Agents	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Guthion	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Heptachlor ^c	0	5.2E-01	3.8E-03	na	2.1E-03	2.1E+00	1.7E-02	na	6.3E-02	1.3E-01	9.5E-04	na	2.1E-04	5.2E-01	4.4E-03	na
Heptachlor Epoxide ^c	0	5.2E-01	3.8E-03	na	1.1E-03	2.1E+00	1.7E-02	na	1.1E-04	1.3E-01	9.5E-04	na	3.3E-03	5.2E-01	4.4E-03	na
Hexachlorobenzene ^c	0	-	-	na	7.7E-03	-	-	na	7.7E-04	-	-	na	2.3E-02	-	-	na
Hexachlorobutadiene ^c	0	-	-	na	5.0E+02	-	-	na	5.0E+01	-	-	na	1.5E+03	-	-	na
Hexachlorocyclohexane	0	-	-	na	1.3E-01	-	-	na	1.3E-02	-	-	na	3.9E-01	-	-	na
Alpha-BHC ^c	0	-	-	na	4.6E-01	-	-	na	4.6E-02	-	-	na	1.4E+00	-	-	na
Beta-BHC ^c	0	-	-	na	6.3E-01	3.8E+00	-	na	6.3E-02	2.4E-01	-	na	1.9E+00	9.5E-01	-	na
Hexachlorocyclohexane Gamma-BHC ^c (Lindane)	0	9.5E-01	na	na	1.9E+01	-	-	na	1.7E+03	-	-	na	1.5E+04	-	-	na
Hexachlorocyclopentadiene	0	-	-	na	8.9E+01	-	-	na	8.9E+00	-	-	na	2.7E+02	-	-	na
Hexachloroethane ^c	0	-	-	na	2.0E+00	-	-	na	5.0E-01	-	-	na	2.3E+00	-	-	na
Hydrogen Sulfide	0	-	-	na	4.9E-01	-	-	na	4.9E-02	-	-	na	1.5E+00	-	-	na
Indeno (1,2,3-cd) pyrene ^c	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Iron	0	-	-	na	2.6E+04	-	-	na	2.6E+03	-	-	na	7.8E+04	-	-	na
Isophorone ^c	0	-	-	na	0.0E+00	-	-	na	0.0E+00	-	-	na	0.0E+00	-	-	na
Kepone	0	2.0E+01	2.3E+00	na	-	8.2E+01	1.1E+01	na	5.1E+00	5.1E+00	5.8E-01	na	2.0E+01	2.0E+01	2.7E+00	na
Lead	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Malathion	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Manganese	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	5.6E+00	3.5E+00	na	4.6E-01	3.5E-01	1.9E-01	na	5.1E-03	1.4E+00	8.8E-01	na
Methyl Bromide	0	-	-	na	4.0E+03	-	-	na	4.0E+02	-	-	na	3.6E+03	-	-	na
Methoxychlor	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Mirex	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Monochlorobenzene	0	-	-	na	2.1E+04	-	-	na	2.1E+03	-	-	na	1.9E+04	-	-	na
Nickel	0	5.6E+01	6.3E+00	na	4.6E+03	2.3E+02	2.9E+01	na	4.6E+02	1.4E+01	1.6E+00	na	4.1E+03	5.7E+01	7.2E+00	na
Nitrates (as N)	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
Nitrobenzene	0	-	-	na	1.9E+03	-	-	na	1.9E+02	-	-	na	1.7E+03	-	-	na
N-Nitrosodimethylamine ^c	0	-	-	na	8.1E+01	-	-	na	8.1E+00	-	-	na	2.4E+02	-	-	na
N-Nitrosodiphenylamine ^c	0	-	-	na	1.6E+02	-	-	na	1.6E+01	-	-	na	4.8E+02	-	-	na
N-Nitrosodi-n-propylamine ^c	0	-	-	na	1.4E+01	-	-	na	1.4E+00	-	-	na	4.2E+01	-	-	na
Parathion	0	6.5E-02	1.3E-02	na	-	2.6E-01	8.0E-02	na	-	1.6E-02	3.9E-03	na	-	6.5E-02	1.5E-02	na
PCB-1016	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB-1221	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB-1232	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB-1242	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB-1248	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB-1254	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB-1260	0	-	-	na	-	-	-	na	-	-	-	na	-	-	-	na
PCB Total ^c	0	-	-	na	1.7E-03	-	-	na	1.7E-04	-	-	na	5.1E-03	-	-	na

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Pentachlorophenol ^c	0	3.1E+00	2.5E+00	na	8.2E+01	1.3E+01	1.2E+01	na	2.5E+03	7.9E-01	6.3E-01	na	8.2E+00	3.2E+00	2.9E+00	na
Phenol	0	--	--	na	4.6E+06	--	--	na	4.1E+07	--	--	na	4.6E+05	--	--	na
Pyrene	0	--	--	na	1.1E+04	--	--	na	9.9E+04	--	--	na	1.1E+03	--	--	na
Radionuclides (pCi/except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na
Gross Alpha Activity (mem/y)	0	--	--	na	1.5E+01	--	--	na	1.3E+02	--	--	na	1.3E+01	--	--	na
Beta and Photon Activity (mem/y)	0	--	--	na	4.0E+01	--	--	na	3.6E+01	--	--	na	3.6E+00	--	--	na
Strontium-90	0	--	--	na	8.0E+00	--	--	na	7.2E+01	--	--	na	7.2E+00	--	--	na
Tridium	0	--	--	na	2.0E+04	--	--	na	1.8E+05	--	--	na	1.8E+04	--	--	na
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	8.0E+01	2.3E+01	na	9.9E+04	5.0E+00	1.3E+00	na	1.1E+03	2.0E+01	5.7E+00	na
Silver	0	3.2E-01	--	na	--	1.3E+00	--	na	--	7.9E-02	--	na	--	3.2E-01	--	na
Sulfate	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na
1,1,2,2-Tetrachloroethane ^c	0	--	--	na	1.1E+02	--	--	na	3.3E+03	--	--	na	1.1E+01	--	--	na
Tetrachloroethylene ^c	0	--	--	na	8.9E+01	--	--	na	8.9E+00	--	--	na	8.9E+00	--	--	na
Thallium	0	--	--	na	6.3E+00	--	--	na	5.7E+01	--	--	na	6.3E-01	--	--	na
Toluene	0	--	--	na	2.0E+05	--	--	na	1.8E+06	--	--	na	2.0E+04	--	--	na
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na
Toxaphene ^c	0	7.3E-01	2.0E-04	na	7.5E-03	2.9E+00	9.2E-04	na	2.3E-01	1.8E-01	5.0E-05	na	7.5E-04	7.3E-01	2.3E-04	na
Tributyltin	0	4.6E-01	6.3E-02	na	--	1.8E+00	2.9E-01	na	--	1.2E-01	1.6E-02	na	--	4.6E-01	7.2E-02	na
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	8.4E+03	--	--	na	9.4E+01	--	--	na
1,1,2-Trichloroethane ^c	0	--	--	na	4.2E+02	--	--	na	4.2E+01	--	--	na	4.2E+03	--	--	na
Trichloroethylene ^c	0	--	--	na	8.1E+02	--	--	na	2.4E+04	--	--	na	8.1E+01	--	--	na
2,4,6-Trichlorophenol ^c	0	--	--	na	6.6E+01	--	--	na	2.0E+03	--	--	na	6.6E+00	--	--	na
2-(2,4,5-Trichlorophenoxy)propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na
Vinyl Chloride ^c	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na
Zinc	0	3.6E+01	3.6E+01	na	6.9E+04	1.5E+02	1.7E+02	na	6.2E+05	9.1E+00	9.1E+00	na	6.9E+03	3.6E+01	4.2E+01	na

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 20 maximum for Industries and design flow for Municipalities
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information. Antidegradation WLAs are based upon a complete mix.
- Antidegradation Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	3.9E+03
Arsenic	1.0E+02
Barium	na
Cadmium	2.6E-01
Chromium III	1.6E+01
Chromium VI	6.4E+00
Copper	1.5E+00
Iron	na
Lead	1.6E+00
Manganese	na
Mercury	4.8E-02
Nickel	4.3E+00
Selenium	3.4E+00
Silver	1.3E-01
Zinc	1.5E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Attachment H

Federal Effluent Guidelines for RCRA Subtitle D Nonhazardous Waste Landfills (40 CFR 445.20 Subpart B)

Environmental Protection Agency

§ 445.21

Facilities, Subpart N—(Landfills); and 40 CFR Part 265, *Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart N—(Landfills)*.

§ 445.11 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BPT:

EFFLUENT LIMITATIONS

Regulated parameter	Maximum daily ¹	Maximum monthly avg. ¹
BOD ₅	220	56
TSS	88	27
Ammonia (as N)	10	4.9
α-Terpineol	0.042	0.019
Aniline	0.024	0.015
Benzoic acid	0.119	0.073
Naphthalene	0.059	0.022
p-Cresol	0.024	0.015
Phenol	0.048	0.029
Pyridine	0.072	0.025
Arsenic	1.1	0.54
Chromium	1.1	0.46
Zinc	0.535	0.296
pH	(²)	(²)

¹ Milligrams per liter (mg/L, ppm).

² Within the range 6 to 9.

[65 FR 3048, Jan. 19, 2000; 65 FR 14344, Mar. 16, 2000]

§ 445.12 Effluent limitations attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BCT: Limitations for BOD₅, TSS and pH are the same as the corresponding limitations specified in § 445.11.

§ 445.13 Effluent limitations representing the degree of effluent reduction attainable by the application of best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BAT: Limitations for ammonia (as N), α-terpineol, aniline, benzoic acid, naphthalene, p-cresol, phenol, pyridine, arsenic, chromium and zinc are the

same as the corresponding limitations specified in § 445.11.

§ 445.14 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following performance standards: Standards are the same as those specified in § 445.11.

Subpart B—RCRA Subtitle D Non-Hazardous Waste Landfill

§ 445.20 Applicability.

Except as provided in § 445.1, this subpart applies to discharges of wastewater from landfills subject to the provisions of 40 CFR part 258, *Criteria for Municipal Solid Waste Landfills*; and 40 CFR part 257, *Criteria for Classification of Solid Waste Disposal Facilities and Practices*.

§ 445.21 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point

§ 445.22

40 CFR Ch. I (7-1-00 Edition)

source subject to this subpart must achieve the following effluent limita-

tions which represent the application of BPT:

EFFLUENT LIMITATIONS

Regulated parameter	Maximum daily ¹	Maximum monthly avg. ¹
BOD	140	37
TSS	88	27
Ammonia (as N)	10	4.8
α -Terpineol	0.033	0.016
Benzoic acid	0.12	0.071
p-Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH	(²)	(²)

¹ Milligrams per liter (mg/L, ppm)
² Within the range 6 to 9.

[65 FR 3048, Jan. 19, 2000; 65 FR 14344, Mar. 16, 2000]

§ 445.22 Effluent limitations attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BCT: Limitations for BOD₅, TSS and pH are the same as the corresponding limitations specified in § 445.21.

§ 445.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30—125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BAT: Limitations for ammonia (as N), α -terpineol, benzoic acid, p-cresol, phenol and zinc are the same as the corresponding limitations specified in § 445.21.

§ 445.24 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following performance standards: Standards are the same as those specified in § 445.21.

PART 446—PAINT FORMULATING POINT SOURCE CATEGORY

Subpart A—Oil-Base Solvent Wash Paint Subcategory

Sec.

446.10 Applicability; description of the oil-base solvent wash paint subcategory.

446.11 Specialized definitions.

446.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

446.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

446.14 [Reserved]

446.15 Standards of performance for new sources.

446.16 Pretreatment standards for new sources.

AUTHORITY: Secs. 301, 304(b) and (c), 306(b) and (c) and 307(c), Federal Water Pollution Control Act, as amended (the Act); 33 U.S.C. 1251, 1311, 1314(b) and (c), 1316(b) and (c) and 1317(c); 86 Stat. 816 *et seq.*; Pub. L. 92-500.

SOURCE: 40 FR 31725, July 28, 1975, unless otherwise noted.

Subpart A—Oil-Base Solvent Wash Paint Subcategory

§ 446.10 Applicability; description of the oil-base solvent wash paint subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of oil-base paint where the tank cleaning is performed using

Attachment I

Toxics Management Program Justification Memorandum

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
West Central Regional Office

3019 Peters Creek Road

Roanoke, VA 24019

SUBJECT: TMP Justification for Franklin County Landfill
VPDES Permit No. VA0092142

TO: Permit File

FROM: Becky L. France, Environmental Engineer Senior *BLF*

DATE: November 15, 2007

GENERAL INFORMATION/ DISCUSSION:

This facility is a solid waste landfill. The discharges consist of potentially contaminated storm water from the landfill and treated ground water. Contaminated ground water will be treated by an air stripper and discharged to an intermittent stream which flows into the North Fork of Little Chestnut Creek at the property boundary.

RECOMMENDATIONS:

In accordance with the VPDES Permit Manual, the facility's SIC Code (4953- Solid Waste Collection) is subject to toxicity testing requirements. Ground water well data collected in November of 2005 indicated that the presence of some metals and volatile organic chemicals. Toxicity testing is needed to determine if the mixture of these chemicals is toxic to aquatic life.

Commencing within three months of commencement of discharge from outfall 101, the permittee shall conduct quarterly acute and chronic toxicity testing using C. dubia and P. promelas until 10 sets of data are collected. Since the discharge is not expected to be variable, grab samples shall be collected. The data report for this sampling shall be due on the tenth of the month following sampling. If after evaluating the data, it is determined that no limit is needed, the permittee shall begin conducting annual testing thereafter as given in the permit schedule.

Table 1

FACILITY INFORMATION

FACILITY: Franklin County Landfill

LOCATION: 9340 Virgil H. Goode Highway, Rocky Mount

VPDES PERMIT NUMBER: VA0092142 (Issuance)

SIC CODE/DESCRIPTION: 4953 (Solid Waste Landfill)

OUTFALLS: Outfall 001

Outfall 101 (Storm Water)

Outfall 102 (Treated Ground Water)

RECEIVING STREAM/CRITICAL FLOWS:

Receiving Stream:	North Fork, Little Chestnut Creek		
River Basin:	Roanoke River		
River Subbasin:	Roanoke River		
Section:	6a		
Class:	III		
Special Standards:	NEW-1		
1Q10 =	0.26 MGD	30Q5 =	0.69 MGD
7Q10 =	0.31 MGD	Harmonic mean =	2.51 MGD

TREATMENT:

Storm Water – storm water detention basin

Ground Water – air stripper and pH adjustment

TMP REQUIREMENTS

OUTFALL 101

Biological Monitoring

Commencing within three months of discharge, the permittee shall conduct quarterly acute and chronic toxicity testing using C. dubia and P. promelas until 10 sets of data are collected. The data report for this sampling shall be due on the tenth of the month following sampling. If after evaluating the data, it is determined that no limit is needed, the permittee shall begin conducting annual testing shall be thereafter as given in the permit schedule.

Spreadsheet for determination of WET test endpoints or WET limits

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1														
2														
3														
4	Excel 97													
5	Revision Date: 06/07/04													
6	File: WET.LM10.xls													
7	(MIX EXE required also)													
8														
9														
10														
11														
12														
13														
14														
15	Enter data in the cells with blue type:													
16	Entry Date:	11/30/07												
17	Facility Name:	Franklin County Landfill												
18	VPDES Number:	VA0092142												
19	Outfall Number:	102												
20	Plant Flow:	0.0864 MGD												
21	Acute 1Q10:	0.26 MGD												
22	Chronic 7Q10:	0.31 MGD												
23														
24														
25	Are data available to calculate CV?	(Y/N)												
26	Are data available to calculate ACR?	(Y/N)												
27														
28														
29	IWC _a	24.9422633 %												
30	IWC _c	21.7961655 %												
31														
32	Dilution, acute	4.00925926												
33	Dilution, chronic	4.58796296												
34														
35														
36	WLA _a	1.20277778												
37	WLA _c	4.58796296												
38	WLA _{ss}	12.0277778												
39														
40	ACR - acute/chronic ratio	10												
41	CV - Coefficient of variation	0.6												
42	Constants	0.4109447												
43	eA	0.6010373												
44	eB	2.4334175												
45	eC	2.4334175												
46	eD	2.4334175												
47	LTA _{ss}	4.94275153												
48	LTA _a	2.75753687												
49	MDL** with LTA _{ss}	12.0277778												
50	MDL** with LTA _a	6.71023848												
51	AML with lowest LTA	6.71023848												
52														
53	IF ONLY ACUTE ENDPOINT/LIMIT IS NEEDED, CONVERT MDL FROM TU _a TO TU _c													
54	MDL with LTA _{ss}	1.20277781												
55	MDL with LTA _a	0.67102385												
56														
57														
58														

Acute Endpoint/Permit Limit

Use as LC₅₀ in Special Condition, as TU_a on DMR

ACUTE 100% = NOAEC

ACUTE WLA_a 1.20277778

Note: Inform the permittee that if the mean of the data exceeds this TU_a, a limit may result using WLA EXE

1.0

LC₅₀ = NA

% Use as

NA

TU_a

Chronic Endpoint/Permit Limit

Use as NOEC in Special Condition, as TU_c on DMR

CHRONIC 6.710238481 TU_c

NOEC =

15 % Use as

6.66

TU_c

BOTH* 12.02777807 TU_c

NOEC =

9 % Use as

11.11

TU_c

AML 6.710238481 TU_c

NOEC =

15 % Use as

6.66

TU_c

Note: Inform the permittee that if the mean of the data exceeds this TU_c, a limit may result using WLA EXE

2.75753674

% Flow to be used from MIX EXE

100 %

100 %

Diffuser / modeling study?

Enter Y/N

N

Acute

1:1

Chronic

1:1

Go to Page 2

Go to Page 3

NOTE: If the IWC_a is >33%, specify the

NOAEC = 100% test/endpoint for use

NOAEC =

100%

The Maximum Daily Limit is calculated from the lowest LTA, X's eC. The LTA_{ss} and MDL using it are driven by the ACR.

Rounded NOEC's

NOEC =

9 %

NOEC =

15 %

NOEC =

15

Rounded LC50's

LC50 =

84 %

LC50 =

NA

LC50 =

NA

[illegible]

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Page 3 - Follow directions to develop a site specific ACR (Acute to Chronic Ratio)														
To determine Acute/Chronic Ratio (ACR), insert usable data below. Usable data is defined as valid paired test results, acute and chronic, tested at the same temperature, same species. The chronic NOEC must be less than the acute LC50, since the ACR divides the LC50 by the NOEC. LC50's > 100% should not be used.														
Table 1. ACR using Vertebrate data														
Set #	LC50	NOEC	Test ACR	Logarithm	Geomean	Antilog	ACR to Use							
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
ACR for vertebrate data:								D						
Table 1. Result:								0						
Table 2. Result:								0						
Table 2. Result:								Default to 10						
Table 2. ACR using Invertebrate data														
Set #	LC50	NOEC	Test ACR	Logarithm	Geomean	Antilog	ACR to Use							
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA							
ACR for invertebrate data:								0						
Table 3.														
Convert LC50's and NOEC's to Chronic TU's for use in WLA EXE								10						
Enter LC50								Enter NOEC						
Enter LC50								Enter NOEC						
1								TUC						
2								NO DATA						
3								NO DATA						
4								NO DATA						
5								NO DATA						
6								NO DATA						
7								NO DATA						
8								NO DATA						
9								NO DATA						
10								NO DATA						
11								NO DATA						
12								NO DATA						
13								NO DATA						
14								NO DATA						
15								NO DATA						
16								NO DATA						
17								NO DATA						
18								NO DATA						
19								NO DATA						
20								NO DATA						
If WLA EXE determines that an acute limit is needed, you need to convert the TUC answer you get to TUC and then an LC50, enter it here:														
								NO DATA						
								TUC						
Table 4.														
DILUTION SERIES TO RECOMMEND														
Monitoring														
Limit														
TUC														
% Effluent														
15														
0.3872983														
6.888667														
Dilution series based on data mean														
Dilution series to use for limit														
Dilution factor to recommend:														
100.0														
60.2														
36.3														
21.8														
13.15														
7.92														
12.63														
20.97														
4.77														
0.3														
296.30														
Extra dilutions if needed														

Cell: J9

Comment:

This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: K16

Comment:

This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: J22

Comment:

Remember to change the "N" to "Y" if you have ratios entered, otherwise, they won't be used in the calculations.

Cell: C40

Comment:

If you have entered data to calculate an ACR on page 3, and this is still defaulted to "0", make sure you have selected "Y" in cell E21

Cell: C41

Comment:

If you have entered data to calculate an effluent specific CV on page 2, and this is still defaulted to "0.6", make sure you have selected "Y" in cell E20

Cell: L48

Comment:

See Row 151 for the appropriate dilution series to use for these NOEC's

Cell: G62

Comment:

Vertebrates are:

Pinophales promelas
Onchorynchus mykiss
Cyprinodon variegatus

Cell: J62

Comment:

Invertebrates are:

Ceriodaphnia dubia
Myadopsis bahia

Cell: C117

Comment:

Vertebrates are:

Pinophales promelas
Cyprinodon variegatus

Cell: M119

Comment:

The ACR has been picked up from cell C34 on Page 1. If you have paired data to calculate an ACR, enter it in the tables to the left, and make sure you have a "Y" in cell E21 on Page 1. Otherwise, the default of 10 will be used to convert your acute data.

Cell: M121

Comment:

If you are only concerned with acute data, you can enter it in the NOEC column for conversion and the number calculated will be equivalent to the T_{UA}. The calculation is the same: 100/NOEC = T_{UC} or 100/(C50 = T_{UA}.

Cell: C138

Comment:

Invertebrates are:

Ceriodaphnia dubia
Myadopsis bahia

Cell: J9

Comment: This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: K18

Comment: This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: J22

Comment: Remember to change the "N" to "Y" if you have ratios entered, otherwise, they won't be used in the calculations.

Cell: C40

Comment: If you have entered data to calculate an ACR on page 3, and this is still defaulted to "10", make sure you have selected "Y" in cell E21

Cell: C41

Comment: If you have entered data to calculate an effluent specific CV on page 2, and this is still defaulted to "0.6", make sure you have selected "Y" in cell E20

Cell: L48

Comment: See Row 151 for the appropriate dilution series to use for these NOEC's

Cell: G62

Comment:

Vertebrates are:
Pimphales promelas
Oncomorhynchus mykiss
Cyprinodon variegatus

Cell: J62

Comment:

Invertebrates are:
Ceriodaphnia dubia
Mysidopsis bahia

Cell: C117

Comment: Vertebrates are:

Pimphales promelas
Cyprinodon variegatus

Cell: M119

Comment: The ACR has been picked up from cell C34 on Page 1. If you have paired data to calculate an ACR, enter it in the tables to the left, and make sure you have a "Y" in cell E21 on Page 1. Otherwise, the default of 10 will be used to convert your acute data.

Cell: M121

Comment: If you are only concerned with acute data, you can enter it in the NOEC column for conversion and the number calculated will be equivalent to the TUA. The calculation is the same: $100/\text{NOEC} = \text{TUc}$ or $100/\text{LC50} = \text{TUA}$.

Cell: C138

Comment: Invertebrates are:

Ceriodaphnia dubia
Mysidopsis bahia

Attachment J

NPDES Permit Rating Worksheet

NPDES PERMIT RATING WORK SHEET

- ☐ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status change
☐ Deletion

NPDES NO. VA0092142

Facility Name: Franklin County Sanitary Landfill

City: Rocky Mount, Virginia

Receiving Water: North Fork of Little Chestnut Creek

Reach Number: _____

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

☐ YES; score is 600 (stop here) ☒ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

☐ YES; score is 700 (stop here)
☒ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary SIC Code: 4953 Other SIC Codes: _____
 Industrial Subcategory Code: 1 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input checked="" type="checkbox"/> 7.	7	35
<input type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 7

Total Points Factor 1: 35

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A ☐ Wastewater Flow Only Considered

Wastewater Type (See Instructions)	Code	Points
Type I: Flow < 5 MGD	11	0
Flow 5 to 10 MGD	12	10
Flow > 10 to 50 MGD	13	20
Flow > 50 MGD	14	30
Type II: Flow < 1 MGD	21	10
Flow 1 to 5 MGD	22	20
Flow > 5 to 10 MGD	23	30
Flow > 10 MGD	24	50
Type III: Flow < 1 MGD	31	0
Flow 1 to 5 MGD	32	10
Flow > 5 to 10 MGD	33	20
Flow > 10 MGD	34	30

Section B ☐ Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10 %	41	0
	10 % to < 50 %	42	10
	> 50 %	43	20
Type II:	< 10 %	51	0
	10 % to < 50 %	<input checked="" type="checkbox"/> 52	20
	> 50 %	53	30

Code Checked from Section A or B: 52

Total Points Factor 2: 20

FACTOR 3: Conventional Pollutants
(only when limited by the permit)

NPDES NO: VA0092142

A. Oxygen Demanding Pollutant: (check one)

☒ BOD ☐ COD ☐ Other: _____

Permit Limits: (check one)			Code	Points
<input type="checkbox"/>	<input type="checkbox"/>	< 100 lbs/day	1	0
<input type="checkbox"/>	<input type="checkbox"/>	100 to 1000 lbs/day	2	5
<input type="checkbox"/>	<input type="checkbox"/>	> 1000 to 3000 lbs/day	3	15
<input type="checkbox"/>	<input type="checkbox"/>	> 3000 lbs/day	4	20

Code Checked: NA

Points Scored: 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)			Code	Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	< 100 lbs/day	1	0
<input type="checkbox"/>	<input type="checkbox"/>	100 to 1000 lbs/day	2	5
<input type="checkbox"/>	<input type="checkbox"/>	> 1000 to 5000 lbs/day	3	15
<input type="checkbox"/>	<input type="checkbox"/>	> 5000 lbs/day	4	20

Code Checked: NA

Points Scored: 0

C. Nitrogen Pollutant: (check one)

☐ Ammonia ☐ Other: _____

Permit Limits: (check one)			Code	Points
<input type="checkbox"/>	<input type="checkbox"/>	Nitrogen Equivalent		
<input type="checkbox"/>	<input type="checkbox"/>	< 300 lbs/day	1	0
<input type="checkbox"/>	<input type="checkbox"/>	300 to 1000 lbs/day	2	5
<input type="checkbox"/>	<input type="checkbox"/>	> 1000 to 3000 lbs/day	3	15
<input type="checkbox"/>	<input type="checkbox"/>	> 3000 lbs/day	4	20

Code Checked: NA

Points Scored: 0

Total Points Factor 3: 0

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

☐ YES (If yes, check toxicity potential number below)

☒ NO (If no, go to Factor 5)

Determine the *human health* toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column ☐ check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked: NA

Total Points Factor 4: 0

FACTOR 5: Water Quality FactorsNPDES NO. VA0092142

- A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge:*

<input checked="" type="checkbox"/>	Yes	Code 1	Points 10
<input type="checkbox"/>	No	2	0

- B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

<input checked="" type="checkbox"/>	Yes	Code 1	Points 0
<input type="checkbox"/>	No	2	5

- C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

<input type="checkbox"/>	Yes	Code 1	Points 10
<input checked="" type="checkbox"/>	No	2	0

Code Number Checked: A 1 B 1 C 2Points Factor 5: A 10 + B 0 + C 0 = 10 TOTAL**FACTOR 6: Proximity to Near Coastal Waters**

- A. *Base Score: Enter flow code here (from Factor 2):* 51

Enter the multiplication factor that corresponds to the flow code: 0.10

Check appropriate facility HPRI Code (from PCS):

	<i>HPRI#</i>	<i>Code</i>	<i>HPRI Score</i>	<i>Flow Code</i>	<i>Multiplication Factor</i>
<input type="checkbox"/>	1	1	20	11, 31, or 41	0.00
<input type="checkbox"/>	2	2	0	12, 32, or 42	0.05
<input type="checkbox"/>	3	3	30	13, 33, or 43	0.10
<input checked="" type="checkbox"/>	4	4	0	14 or 34	0.15
<input type="checkbox"/>	5	5	20	21 or 51	0.10
				22 or 52	0.30
				23 or 53	0.60
HPRI code checked:				24	1.00

HPRI code checked: Base Score: (HPRI Score) 0 X (Multiplication Factor) 0.1 = 0 (TOTAL POINTS)

- B. *Additional Points* ☐ *NEP Program*
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
<input type="checkbox"/> Yes	1	10
<input checked="" type="checkbox"/> No	2	0

- C. *Additional Points* ☐ *Great Lakes Area of Concern*
For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see Instructions)

	Code	Points
<input type="checkbox"/> Yes	1	10
<input checked="" type="checkbox"/> No	2	0

Code Number Checked:

A 4 B 2 C 2Points Factor 6: A 0 + B 0 + C 0 = 0 TOTAL

SCORE SUMMARYNPDES NO. VA0092142

Factor	Description	Total Points
1	Toxic Pollutant Potential	<u>35</u>
2	Flows/Streamflow Volume	<u>20</u>
3	Conventional Pollutants	<u>0</u>
4	Public Health Impacts	<u>0</u>
5	Water Quality Factors	<u>10</u>
6	Proximity to Near Coastal Waters	<u>0</u>
	TOTAL (Factors 1 through 6)	<u>65</u>

S1. Is the total score equal to or greater than 80? ☐ Yes (Facility is a major) ☒ No

S2. If the answer to the above questions is no, would you like this facility to be a discretionary major?

☒ No☐ Yes (Add 500 points to the above score and provide reason below:

Reason:

NEW SCORE: 65OLD SCORE: NABecky L. France

Permit Reviewer's Name

(540) 562-6700

Phone Number

11/29/07

Date

Attachment K

Public Notice

PUBLIC NOTICE – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater and storm water into a water body in Franklin County.

PUBLIC COMMENT PERIOD: 30 days following the public notice issue date; comment period ends 4:30 pm of last day

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater and Storm Water; issued by DEQ, under the authority of the State Water Control Board

NAME, ADDRESS, AND PERMIT NUMBER OF APPLICANT: Franklin County, 40 East Court Street, Rocky Mount, VA 24151, VA0092142

NAME AND ADDRESS OF FACILITY: Franklin County Board of Supervisors, 9340 Virgil H. Goode Highway, Rocky Mount, VA 24151

PROJECT DESCRIPTION: Franklin County has applied for a new permit for the Franklin County Sanitary Landfill in Franklin County, Virginia. The applicant proposes to release storm water and treated ground water at a rate of 0.0864 MGD into a water body. The applicant proposes to release the treated industrial ground water and storm water into the North Fork of Little Chestnut Creek in Franklin County in the Big Chestnut Creek/Little Chestnut Creek watershed (VAW-L15R). A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: solids, organic matter, toxic pollutants.

HOW TO COMMENT: DEQ accepts comments by e-mail, fax, or postal mail. All comments must be in writing and be received by DEQ during the comment period. The public also may request a public hearing. Written comments must include: 1) The names, mailing addresses, and telephone numbers of the person commenting and of all people represented by the citizen. 2) If a public hearing is requested, the reason for holding a hearing, including associated concerns. 3) A brief, informal statement regarding the extent of the interest of the person commenting, including how the operation of the facility or activity affects the citizen. DEQ may hold a public hearing, including another comment period, if a public response is significant and there are substantial, disputed issues relevant to the proposed permit. The public may review the draft permit and application at the DEQ office named below.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS, AND ADDITIONAL INFORMATION:

NAME: Becky L. France; **ADDRESS:** Virginia Department of Environmental Quality, West Central Regional Office, 3019 Peters Creek Road, Roanoke, VA 24019-2738; **PHONE:** (540) 562-6700; **E-MAIL ADDRESS:** blfrance@deq.virginia.gov; **FAX:** (540) 562-6860

Revised 2/2003

**State "FY2003 Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Franklin County Sanitary Landfill

NPDES Permit Number: VA0092142

Permit Writer Name: Becky L. France

Date: 11/28/07

Major [] Minor [X] Industrial [X] Municipal []

I.A. Draft Permit Package Submittal Includes:

	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?			X
6. A Reasonable Potential analysis showing calculated WQBELs?			X
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		

I.B. Permit/Facility Characteristics – cont. (FY2003)	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?		X	
a. Has a TMDL been developed and approved by EPA for the impaired water?			X
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			X
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?	X		
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)? (*Permit requires permittee to conduct survey to determine if endangered/threatened species are in the mixing zone of the proposed discharge.)	X*		
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			X
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined? Storm water general permit reviewed.	X		

Part II. NPDES Draft Permit Checklist (FY2003)

Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?	X		
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?	X		
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			X
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits? No calculations needed.			X
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed? No data to evaluate.			X
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			X
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			X
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			X
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

FY2003

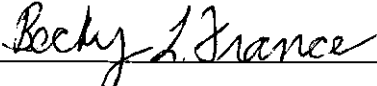
II.E. Monitoring and Reporting Requirements (FY2003)	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			X
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs? SWPPP	X		
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?	X		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		
List of Standard Conditions – 40 CFR 122.41			
Duty to comply	Property rights	Reporting Requirements	
Duty to reapply	Duty to provide information	Planned change	
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance	
not a defense	Monitoring and records	Transfers	
Duty to mitigate	Signatory requirement	Monitoring reports	
Proper O & M	Bypass	Compliance schedules	
Permit actions	Upset	24-Hour reporting	
		Other non-compliance	
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page (FY2003)

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Becky L. France</u>
Title	<u>Environmental Engineer Senior</u>
Signature	<u></u>
Date	<u>11/28/07</u>